DOCUMENT RESUME

ED 297 660 HE 021 628

TITLE	Time to Degree in California's Public Universities. Factors Contributing to the Length of Time Undergraduates Take To Earn Their Bachelor's Degree. Report 88-12.
INSTITUTION	California State Postsecondary Education Commission, Sacramento.
PUB DATE	Mar 88
NOTE	117p.
AVAILABLE FROM	Publications Office, California Postsecondary Education Commission, Third Floor, 1020 Twelfth Street, Sacramento, CA 95814-3985.
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Academic Advising; *Academic Persistence; *College Students; *Degrees (Academic); Financial Needs; Higher Education; Questionnaires; Student Costs; Student Educational Objectives; Student Financial Aid; Student Motivation; Student Needs; *Student Problems; Success; Surveys
IDENTIFIERS	*California; California State University; *Time to Degree; University of California

ABSTRACT

Studies conducted by the University of California and California State University, concerning the time students take to complete the baccalaureate degree, are synopsized and reported. The methodology, findings, and conclusions of each report are provided separately, and the reports themselves are appended, along with the survey instruments. A synopsis of the two reports shows several similarities in their findings: (1) a cluster of factors in both reports concerning students' financial needs and corresponding needs for extensive employment and a lower courseload; (2) changing majors; (3) difficulty in getting required classes; (4) taking courses for personal interest rather than for degree requirements; and (5) needing better or more timely advising. Two recommendations are made: that the California Student Aid Commission carefully consider the implications of these studies in determining whether changes are needed in California's student aid programs; and that both universities should continue to try to reduce the negative causes of delayed graduation and should take action to improve academic advising and access to required courses. Contains 10 references. (KM)

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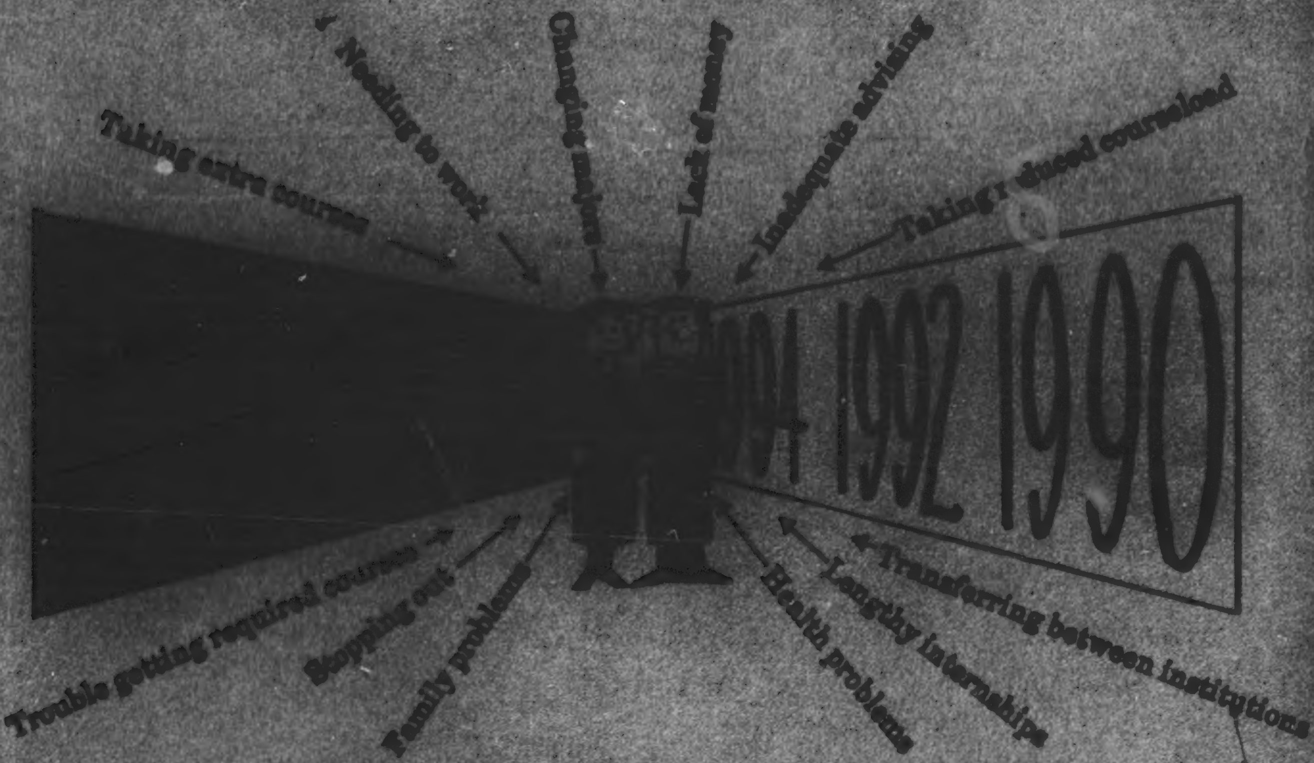
TIME TO DEGREE IN CALIFORNIA'S PUBLIC UNIVERSITIES

Factors Contributing to the Length of Time Undergraduates Take to Earn Their Bachelor's Degrees


Taking extra courses
Needing to work
Changing majors
Lack of money
Inadequate advising
Taking reduced courseload
994 1992 1990
Trouble getting required courses
Stopping out
Family problems
Health problems
Lengthy internships
Transferring between institutions

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

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Executive Summary

This three-part document responds to Supplemental Language to the Budget Act of 1987 that (1) instructed the University of California and the California State University to sample student opinion about factors that contribute to taking longer than four years to earn their bachelor's degree, and (2) directed the California Postsecondary Education Commission to review and comment on these studies to the Legislature and Governor.

The Commission's comments and recommendations stemming from the studies appear on pages 1-22 of this document and are followed by the universities' reports of their findings: *Factors Influencing Student Pace Toward Acquisition of the Baccalaureate Degree*, by the University of California, and *Factors Affecting the Time to Degree*, by the California State University.

The Commission concludes that both universities' reports offer much more information from undergraduates than was previously available about their reasons for taking more than four years to earn their degree, and they serve to clarify two problems that are subject to amelioration by the State or the institutions: (1) those delays related to financial need, and (2) those related to institutional arrangements for completing the undergraduate major. On pages 3-4, the Commission offers two recommendations relating to these problems:

1. The California Student Aid Commission should carefully consider the implications of this analysis to determine whether changes in California's student aid programs are warranted for alleviating the financial difficulties that make students unable to complete a bachelor's degree in four years.
2. The University of California and the California State University should continue to seek to reduce the negative causes of delayed graduation and, taking into account this analysis, should take action to improve academic advising and access to required courses; on the latter they should report to the Commission and Legislature by May 1, 1989, regarding their progress toward reducing such barriers.

The Commission adopted this report at its meeting on March 21, 1988, on recommendation of its Policy Development Committee. Additional copies of the report may be obtained from the Library of the Commission at (916) 322-8031. Questions about the substance of the Commission's report may be directed to Dale M. Heckman of the Commission staff at (916) 322-8023. Questions about the University's report may be addressed to Dr. Joyce B. Justus at (415) 642-6403, while those about the State University's report may be directed to Dr. Anthony J. Moye at (213) 590-5975.

TIME TO DEGREE IN CALIFORNIA'S PUBLIC UNIVERSITIES

Factors Contributing to the Length of Time Undergraduates Take to Earn Their Bachelor's Degree

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CALIFORNIA POSTSECONDARY EDUCATION COMMISSION
Third Floor • 1020 Twelfth Street • Sacramento, California 95814-3985

COMMISSION REPORT 88-12
PUBLISHED MARCH 1988

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The Commission gratefully acknowledges the responses of staff in the Office of the President of the University of California and in the Office of the Chancellor of the California State University to Commission staff inquiries about survey data for the two universities' reports. The Commission staff also received timely assistance from intern Rita Cameron-Wedding in its exploratory study of the lengthening baccalaurerate.

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Factors Affecting the Time to Degree, by the California State University

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1 Overview and Recommendations

- Fewer than half of America's college graduates now earn their bachelor's degree within four years, and the percentage appears to be getting steadily smaller.
- Public research-oriented universities vary widely in their four-year graduation rates -- from 75 percent at the University of Virginia and 55 percent at the University of Michigan to about 30 percent at the University of California and less at several others.
- At the California State University, only one of every four who entered as freshmen in 1978 managed to graduate in five years.

For reasons such as these, two years ago the California Legislature asked the University of California and the California State University to determine, on the basis of information already at hand, how long their students took to earn bachelor's degrees between 1975 and 1985 and the reasons why students took more than four years to graduate (Senate Bill 2066, Morgan; Chapter 991, Statutes of 1986).

With a short deadline and the limitation of using already available information, the University and State University did not include in their responses to SB 2066 the desired student data. In commenting on their reports at the request of the Legislature, the California Postsecondary Education Commission suggested that they gather additional information on students' reasons, including their experience in transferring from Community Colleges or other campuses, and the effects of "impacted" majors and course availability (1987, p. 10).

As a result, the Legislature made a second request in Item 6610-001-001 of Supplemental Language to the Budget Act of 1987 (Senate Bill 152, 1987):

> 11. *Time to Degree Study:* The University of California and the California State University (CSU) shall conduct studies to sample student opinion about factors which contribute to taking longer than four years to receive a baccalaureate degree. Each study shall sample graduates or prospective graduates of the spring of 1987 and shall include a representative sample of campuses and students who have taken five years or longer to complete the baccalaureate degree. Each study should include, but not be limited to, consideration of the following factors:
>
> - availability of general education courses,
> - availability of major required courses,
> - admission status,
> - employment,
> - transfer (how many changes of institution),
> - remedial coursework,
> - double majors,
> - lack of funds,
> - change of major,
> - reduced courseload,
> - and a comparison of time to degree at comparable universities, including those in other states.
>
> These studies shall be submitted to CPEC by October 15, 1987. The commission shall review and comment on the studies, and make recommendations to the Legislature and the Governor on or before December 15, 1987.

The Commission received the University of California's report, *Factors Influencing Student Pace Toward Acquisition of the Baccalaureate Degree* on December 1, 1987, and the report from the State University, *Factors Affecting the Time to Degree*, on February 2, 1988. (The two reports are appended to this document.)

Both reports provide much more information from undergraduates than was previously available about taking more than four years to earn the bachelor's degree. They go a long way toward helping understand the complexity behind extending the time for earning the degree. They go far toward identifying and illuminating aspects of the overall problem that either the institutions themselves or the State might resolve. They also show that the Legislature has identified an issue of considerable proportions and importance.

Synopsis of the two reports

The two studies reveal a few striking similarities in their findings of why students stay longer for their degree. The most common similarity is a cluster of factors that have to do with undergraduates' financial needs and their corresponding needs for extensive employment and a lower courseload of studies. Other delay factors cited most commonly by students in both segments include:

- Changing majors while an undergraduate;
- Difficulty getting required classes;
- Taking courses for personal interest beyond basic requirements; and
- Needing better or more timely advising.

While one or two reasons may dominate for a given individual, those who go on to complete their degree say that a complex of several factors played some role in extending their time. In both the University and the State University, graduates who have taken longer than four years tend to identify several diverse factors per person. In both segments also, remedial coursework accounts for very little of the extended time, according to these graduates.

In other matters, student experiences in the two segments appear much less similar. Transferring from another college and family concerns, for example, seem more related to slowing the academic progress of State University graduates than of University graduates, while repeating courses for better grades seems to affect the progress of University undergraduates more than of State University students.

Neither report provides insight into the students' "time to degree" experience at comparable universities, since the research literature is notably lacking in the kind of self-report information gathered for these two studies.

Summary of the University of California's report

In its report, the University provides data from three campuses showing the reasons given by samples of 1987 bachelor's degree recipients on why they took more than four years to graduate, and from two of these campuses data comparing the relative influence of various factors, including those 10 listed by the Legislature. In addition, it lists four-year graduation rates at 15 public research universities in other states.

The University's survey report satisfies most of the concerns suggested in the Legislature's list of ten factors to investigate, as quoted in the Supplemental Budget Language on page 1.

- It reveals, for example, that among students who continue to graduation, specially admitted students along with underrepresented minorities experience *less*, not more, difficulty than regular and majority students in getting required courses on schedule. Transfer students have only slightly more trouble in those matters than non-transfer students.
- It confirms that student financial needs constitute the most formidable of the unwanted delays for undergraduates at the campuses sampled.
- It shows, surprisingly, that taking remedial coursework causes far fewer delays than repeating courses or changing majors.
- Its sampled 1987 graduates indicate that, on average, three or more different kinds of factors influenced their longer stay.
- And its new data reinforce claims that the problems of obtaining timely advice and gaining access to required courses help to cause many undergraduates unchosen delays in completing their degree. One in three of the University's respondents felt the problems in getting required courses on schedule had influenced delaying their completion, and half of those rated this influence as "important" or "very important."

The University concludes its report with three observations:

- Many University undergraduates choose, of their own volition, to take a longer time at a somewhat reduced pace to complete their bachelor's degree, and usually have valid and positive reasons for doing so.

- To the extent that barriers of an institutional nature cause delays, the University must make serious efforts to find remedies, including interviewing students, "monitoring relevant statistical indicators," and providing the necessary student advising services and academic support structures.
- The State should address the remaining financial aid needs of students.

The report introduces the topic of costs of the delayed baccalaureate, but because the Legislature did not request this information, the University did not attempt to assess the public costs (other than direct instructional ones) entailed in enrolling a large number of fifth-year undergraduates, nor could it compute the unplanned additional costs to these students.

Summary of the State University's report

The State University's report, *Factors Affecting Time to Degree*, also helps to illuminate the complexity of the overall issue, and to resolve several of its aspects.

Using a mailed questionnaire approach very similar to that of the University, the State University finds that (1) financial and employment needs, (2) difficulties in gaining access to particular courses, (3) taking courses beyond minimum requirements, and (4) change of major rank highest among students' reasons for taking longer than four years to the degree.

After listing those factors that are more subject to the student's own action, it concludes with a consideration of five that might be "subject to intervention" by policies and procedures of the State University itself (p. 19):

- Difficulties in getting courses required for the major;
- Difficulties in scheduling general education courses;
- Transferring between colleges;
- Inadequate guidance and counseling; and
- Delays caused by evaluation of courses necessary to complete the final requirements for a degree.

Recommendations

While the similarity between the approaches of the University and of the State University is helpful in the analysis and description of their reports, it is important to avoid comparisons between the two segments on this issue. For example, one would expect a large proportion of undergraduates in the State University to register for a part-time or chronically reduced courseload, whereas historically undergraduates at the University have included only small proportions of part timers. The two segments remain deliberately different, and this difference finds its reflection in different amounts of time their students spend earning a degree. In the rest of this document, therefore, the Commission considers the University's and State University's reports separately and draws comparisons sparingly.

Yet, largely because of the new information provided by the two reports, they have jointly served to clarify two problems that have emerged more distinctly as subject to constructive action by either the institutions or the State: (1) those delays related to the financial need of undergraduates to stretch out the completion of their degree; and (2) those related to institutional arrangements for completing the undergraduate major.

The Commission agrees with the segments that both they and the State should work to reduce educationally negative delays. Therefore it offers these two recommendations:

Recommendation 1: The California Student Aid Commission should carefully consider the implications of this analysis to determine whether changes in California's student aid programs are warranted for alleviating the financial difficulties that make students unable to complete a bachelor's degree in four years.

Recommendation 2: The University of California and the California State University should continue to seek to reduce the negative causes

10

of delayed graduation and, taking into account this analysis, should take action to improve academic advising and access to required courses; on the latter they should report to the Commission and Legislature by May 1, 1989, regarding their progress toward reducing such barriers.

2 The University's Report

Methodology and findings

From the 1987 graduating classes of its Davis, Los Angeles, and Riverside campuses, the University of California selected samples of students who had taken longer than four years to complete their baccalaureate studies and asked them about factors that had led to extending the time.

- For the Riverside and Davis campuses, it sent a one-page questionnaire to 893 members of the graduating class who were finishing after more than four years, of whom 372 (or 42 percent) completed and returned it. To the Legislature's ten factors the University added another nine which it asked these students to rate for their importance as delaying influences.
- At UCLA, the Institute for Social Science Research interviewed by telephone a sample of 89 graduating seniors who had taken longer than four years to graduate, plus 31 about to graduate within four years; the interview schedule for this permitted gathering more detailed information than the mailed questionnaire.

(The University reproduces its survey questionnaire and interview schedule following page 39 of its report.)

Findings from Davis and Riverside

Display 1 on page 6 presents a summary of responses of the Davis and Riverside students to the question about factors influencing their more-than-four years to degree.

- As the display shows, nearly two-thirds of the students checked "took extra courses out of interest" as having at least some influence, resulting in its receiving a higher rank than any other of the 19 factors.
- Next most frequently checked -- nearly 60 percent of respondents -- were the two factors of "change of major" and "needed to work." Indeed, Items 4and 9, and to some extent Item 8, also reflect the financial need of the respondents, and all these rank in the top half.
- In fourth place at 51 percent was "reduced courseload," which, of course, would be a function of other factors.
- "Needed better advising" cited by 47 percent, and "trouble getting major requirements when needed" checked by 33 percent, both exemplify an "institutional process" type of problem. For these two problems, one in three and one in six respondents rated them as important or very important delaying influences.
- Among the low rankings, lack of child care, remedial coursework, time off to travel, and even trouble getting general education requirements when needed were all checked by fewer than 15 percent of those responding.

Findings from Los Angeles

Display 2 on page 7 shows some of the differences between the 89 more-than-four-year graduates and the 31 four-year graduates in UCLA's class of 1987. As can be seen, a far larger proportion of the more-than-four-year graduates than of the four-year graduates had repeated a course, and somewhat more of them had changed majors, taken a double major, or found a general education class closed to them. In contrast, considerably more of the four-year graduates had taken advanced placement courses in high school and were graduating with a higher grade-point average.

Extrapolating from these UCLA data, the University offers an idealized profile of the student who can successfully complete its undergraduate curriculum in the traditional four years. For example, he or she already has completed University courses through advanced placement before ever coming to the campus, does not change majors, and neither fails nor repeats a course. Most of the listed delaying factors appear

DISPLAY 1 Importance of 19 Factors in Taking Longer Than Four Years to Graduate, According to a Sample of 1987 Graduates of the University of California at Davis and Riverside

Rank[1]	Reason for Additional Time	Percent Citing As a Factor[2]	Not a Factor (0)	Slight Influence (1)	Important (2)	Very Important (3)
1.	Took extra courses out of interest	65.9%	34.1%	18.8%	20.2%	26.9%
2.	Needed to work[3]	59.1	40.9	12.4	20.4	26.3
3.	Change of major	59.4	40.6	16.9	14.8	27.7
4.	Reduced courseload	51.3	48.7	11.0	19.1	21.2
5.	Needed better advising	47.3	52.7	14.0	17.2	16.1
6.	Needed a break	37.9	62.1	9.7	12.9	15.3
7.	Repeating coursework	46.0	54.0	28.2	8.9	8.9
8.	Time off to work	24.3	75.8	3.8	7.3	13.2
9.	Ran out of money	25.9	74.2	7.8	6.5	11.6
10.	Trouble getting major requirements when needed	33.1	66.9	16.4	11.3	5.4
11.	Family/marital issues	24.5	75.5	7.8	7.0	9.7
12.	Internship program	24.8	75.3	13.2	5.1	6.5
13.	Double major	16.2	83.9	3.0	4.3	8.9
14.	Athletic activity	16.2	83.9	3.0	4.3	8.9
15.	Personal health problems	18.5	81.5	7.8	4.8	5.9
16.	Time off to travel	14.5	85.5	5.4	4.0	5.1
17.	Remedial coursework	13.9	86.0	10.2	3.2	0.5
18.	Trouble getting general education requirements when needed	11.3	88.7	8.1	1.9	1.3
19.	Lack of child care	2.1	97.8	0.8	0.5	0.8

1. The University calculated the rank order by multiplying the number of persons assigning a given code by the weight assigned to that code (i.e., 0 = not a factor; 3 = very important) and dividing the sum of these products by the total number of persons responding.

2. Percent of respondents assigning a code of 1 = slight influence; 2 = important; or 3 = very important to a given precipitating factor.

3. If the several factors in the top half of the rankings that deal with financial need (2, 4, 9, and possibly 8) are regarded as essentially one reason for delay, the median factor (10) moves up in the rankings two or three places.

Source: Adapted from University of California, 1987, Tables 1 and 2, pp. 4 and 5.

in reverse in this idealized profile, which, as the report observes, "fewer and fewer students seem to fit."

While the University mentions several undergraduate fields commonly marked by higher levels of academic units and while its questionnaire asked what major each respondent had taken, the report does not discuss the effects of particular majors on the time these students needed for earning the baccalaureate, primarily because the statistical sample of each

DISPLAY 2 Differences Between Four-Year and More-Than-Four-Year 1987 Graduates at the University of California, Los Angeles, on Factors Affecting Their Degree Progress

Experience	Four-Year Graduates (N=31)	More-than-Four-Year Graduates (N=89)	Point Difference
Earned advanced placement credit in high school	67%	36%	31%
Feel very or somewhat underprepared for University coursework	26	51	25
Repeated a course	26	68	42
Failed a course	7	15	8
Expected to take longer than four years to complete degree	21	40	19
Changed majors at least once	32	45	13
Have a double major	7	13	8
General education class closed	52	62	10
General education class time changed after student enrolled	3	10	7
General education class canceled	10	15	5
Required class for major closed	36	39	3
Required class for major time changed after student enrolled	0	7	7
Required class for major canceled	19	9	10
University grade-point average (mean)	3.26	2.93	0.33

Source: Adapted from University of California, 1987, Tables 8 and 9, p. 21.

major fields was too small to permit reliable conclusions.

The University's conclusions

In analyzing its findings, the University notes that taking longer than four years for a bachelor's degree can be either positive or negative for the student (p. 25):

> A slower pace may be positive if it reflects sound educational goals. It may be negative if it is due to student dawdling, ineffective university programs, an unsuitable curriculum, or institutional hindrances.

The University then judges that few of the students' reasons for delay stem from institutional hindrances. Regarding problems in getting required courses on schedule, it judges that "students do not see this as a critical issue, by any means" (p. 9). It then summarizes its report as follows: (pp. 33-34):

> As we have seen, students are motivated for a variety of reasons to extend their undergraduate education beyond four years; the University's response, therefore, must also vary.
>
> To the extent that such "delays" reflect institutional barriers, the University must make serious efforts to investigate and remedy the causes: this survey suggests this should include monitoring relevant statistical indicators, interviewing students, and providing the necessary student advising services and other academic support structures. Perhaps more important, the State should address financial aid needs of students whose educational careers have been delayed for financial reasons.

To provide the necessary student advising services, it proposes

> to evaluate carefully both student perceptions of advising, and the variety, quality, and frequency of the [current] advising mechanisms . . . . There are no absolute measures . . . to gauge what would be "enough" advising . . . but the campuses could certainly monitor closely the current mechanisms to discover what students are trying to tell us [about advising].
>
> University/campus advising services need to be assessed in terms of their ability to provide a comprehensive range of support to an increasingly diverse student population. . . . Advising services [may] need to be systematically linked to other student services and programs on campus. In addition, . . . the University could gauge effective programs at other institutions . . . . (p. 34).

Finally, to overcome the most important factor identified by students -- financial pressures -- the University ends its report with these observations (pp. 34-35):

> Drawing from the comments of students, we may isolate two different kinds of financial needs that, students perceive, are not now met adequately. First, students indicated that they do not have access to flexible, short-term financial assistance . . . . (Apparently . . . such students do not see additional loans as a viable solution to their problems.)
>
> Second, students indicated that they do not have access to sufficient student aid. As a result, many students said that they were forced to slow down their degree progress in order to seek partial or full-time employment. To the extent that such employment does not contribute toward educational goals, it must be seen as a negative element, to be addressed primarily by the State (particularly as the federal government reduces its role in this area). The survey results reported here suggest that financial aid is not only an access issue, but also a progress-to-degree issue.

Commission comments

The Commission recognizes that the University has gathered a rich body of information largely lacking from the published research literature about students' reasons for taking longer than four years to earn their bachelor's degree. The responses to its survey have established firmly that students -- at least those who make it all the way to the bachelor's degree after more than four years -- find three kinds of problems most influential in delaying their progress:

1. Factors having to do with financial needs and employment to sustain them through their academic program;
2. Difficulties in wending their way successfully through the requirements and procedures of the academic institution -- timely access to required major courses, timely advising about requirements, and timely counsel on fitting their academic program to their life goals; and
3. Related but more personal choices involving a change of academic major, repetition of courses, and family/marital concerns.*

In that order, the new graduates themselves have rated these as the most influential factors pressing them to stretch out the time for completing their degree, besides the common factor of simply following a personal interest in taking some non-required course.

Indeed the information provided in this study, and in its companion study from the State University, now enables policy makers to focus more sharply on a few of the important questions that emerge from the trend toward the five-year baccalaureate.

Unavailable required courses

The statistical tables in the report show that one in every six of the Davis and Riverside graduates who were surveyed ascribed substantial importance to their inability to get the classes they needed for their major as a factor that helped delay their graduation; at UCLA two of every five graduates who were interviewed reported having similar difficulty because a required major course was filled. The University report downplays the importance of this difficulty of getting into classes to fulfill major requirements. It declares that "students do not see this as a critical issue, by any means," since students mentioned this less frequently than some others. It also states that "trouble enrolling in required coursework is not a problem unique to students who take more than four years to graduate," since similar proportions of four-year and more-than-four-year UCLA students reported experiencing it (p. 9). These facts, however, can lead to quite different conclusions, such as that of all students who encountered substantial difficulty with getting into courses required for their major, about half judge that it actually helped to delay their graduating. Further, among those who are delayed, the data tell of 7 percent who even find that, once having gotten into a required course, they then face an unscheduled change in the time the class will meet.

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* Repetition of coursework at the University is subject to the following restrictions: (1) Beyond the first repetition of a course, approval by the dean of the college, school, or division is required; (2) a student may repeat only courses in which he or she received a grade of D+, D, D-, F, NP, U, or I; (3) units are counted only once and only the most recently earned grade points are used in the case of the first 12 semester units repeated (16 quarter units). When a student is permitted further repetition beyond that number, the grades for all attempts at a course will be averaged.

The number and proportion of the University's undergraduates who report significant delays due to the unavailability of required classes seem high enough to warrant institutional concern. If two of every five students who take more than four years to graduate have found all sections of a needed course already filled and therefore experience a delay, such an institutional hurdle ought to be faced directly.

The University's report indicates that this problem tends to affect regularly admitted students more than it does those who transfer or enter as special admits. Does it therefore result from poor advising, from limited staffing for the required course sections, or from other problems? In any case, it emerges as a significant factor in delaying degrees for many of California's best students and warrants further analysis by the University. In its 1987 report, *Time Required to Earn the Bachelor's Degree*, the Commission recommended a case study approach to the experience of a sample of students to discern both the dimensions of the problem of course availability and strategies for dealing with it (p. 10f). The Commission continues to advocate this case-study approach, since it would yield a level and kind of detail that now seems needed for reducing the problem.

The impact of transfer

Delays stemming directly from the effects of transferring between institutions -- even between University campuses -- are not addressed in the University's study. Nor is the frequency of changes of institution discussed, because "the number of students who transferred more than once constituted a statistically insignificant population" (footnote, p. 1). The University does identify, however, the responses of transfer students in the Davis and Riverside samples to each of the 19 possible delaying factors, for comparison with those of "native" students (Display 3).

These data make clear that transfers suffer even more delay from certain factors than do their native student counterparts: (1) running out of funds and needing to work (Items 2 and 9); (2) repeating coursework (Item 7); and (3) personal problems such as family/marital concerns, health, stress, and lack of adequate child care arrangements.

As can be seen from Display 3, more than twice as many transfer students as "native" students deem running out of money a delaying problem; 13 percent more cite "repeating coursework," and almost twice as many deem personal health problems a factor.

Repetition of courses was cited by this group of transfers 29 percent more frequently than by native students as a delaying factor. Regarding the much higher rate of family and marital problems among transfer students, the University report observes that "this finding is consistent with the fact that a significantly higher proportion of transfer students have established their own families" (p. 18).

Several of these contrasts between transfer and native student graduates seem sharp enough to warrant further monitoring by the University.

Cost considerations

Although the Legislature did not request a discussion of cost, the University introduces the topic by noting that the costs to the State of students taking more than four years to graduate are minimal. Since students generate instructional funds from the State only by the number of academic credit units they at-

DISPLAY 3 Importance of 19 Factors in Taking Longer Than Four Years to Graduate, According to a Sample of 1987 Graduates of the University of California at Davis and Riverside, by Transfer Status

Rank	Reason for Additional Time	Native Students	Transfer Students
1.	Took extra courses out of interest	68%	44%
2.	Needed to work	58	65
3.	Change of major	60	56
4.	Reduced courseload	40	37
5.	Needed better advising	47	44
6.	Needed a break	37	47
7.	Repeating coursework	45	58
8.	Time off to work	58	65
9.	Ran out of money	21	47
10.	Trouble getting major requirements when needed	32	37
11.	Family/marital issues	22	51
12.	Internship program	25	26
13.	Double major	18	2
14.	Athletic activity	18	2
15.	Personal health problems	17	30
16.	Time off to travel	15	15
17.	Remedial coursework	14	14
18.	Trouble getting general education requirements when needed	11	16
19.	Lack of child care	1	14

Source: Adapted from University of California, 1987, Tables 3-7, pp. 8-19.

tempt, regardless of how many semesters they register for courses, the University concludes that:

> If students take full credit loads each quarter, and are still taking more than four years to graduate -- thus graduating with more than the minimum 180 quarter units stipulated as necessary to graduate, the result is additional cost to the State.

But on the other hand,

> a student who . . . takes a reduced courseload each quarter and, as a result, takes five years instead of four to accumulate the necessary credits for graduation does not "cost" the State extra in terms of direct instructional support. The same total support is spread over five years instead of four (p. 27).

By introducing the topic of costs, however, the University prompts consideration of the possible added costs to the public and to undergraduates resulting from large numbers of students' staying more than four years to complete the bachelor's degree. The University's report confines its discussion of costs to direct instructional costs. Other potential costs related to the overall issue could prove of interest, including capital outlay (buildings and other facilities) and impacted housing in campus communities; added cost to students from unplanned delays, including forgone income and time; difficulties with State and federal financial aid that normally stops for undergraduates after eight semesters or twelve quarters; and forgone income taxes.

Variations among majors

On the average, the report points out, those who take five years or more to graduate from the Davis campus accrue 7.9 quarter units more than their four-year counterparts, while at UCLA and Riverside the differences are less. Among particular majors within a campus, however, the variation is substantial, as indicated by differences in the *maximum* units normally allowable.

> For example, at UC Los Angeles, a maximum of 208 units is allowed in the College of Fine Arts and the School of Nursing; in the College of Letters and Science, . . . 216 (228 for double majors and special programs); in the School of Engineering and Applied Science, . . . 213 (p. 28).

Although not specifically requested by the Legislature, a review of the time-lengthening effects of particular major concentrations -- a phenomenon quite familiar to undergraduates -- seems in order.

Certain majors practically ensure that students will take longer than four years to earn the baccalaureate. Several programs require so much time that the Student Aid Commission has exempted them from its four-year limitation in awarding State financial aid -- student aid administrators term these "mandated five-year programs." In addition, the University offers other programs in which, for good reason, maximum unit levels have been approved well beyond the basic 180 quarter minimum. Some majors have become *de facto* five-year concentrations.

Whether the causes for these lengthened requirements are all inevitable, whether many of them stem from outside the University in accrediting agencies in the professions, and what alternatives to them exist are relevant aspects of the issue even if beyond the bounds of this study and need to be addressed by academic bodies.

Additional comments

Two final issues about the University's report deserve note. The first involves the very high number of students who indicate that their taking "extra courses out of interest" was a delaying factor (two-thirds of the respondents checked this item, and 47 percent indicated it was an important or very important factor). As a result, one might logically expect to find a higher number of accrued credits by graduation time. The total accumulation of credits was not notably greater, however. Further analysis may explain the reasons for this seeming contradiction.

The second involves comparisons with other universities. The University notes that its students' *five*-year graduation rate from their campus of initial enrollment is 56 percent, which compares to 85 percent for Stanford. In its table showing recent *four*-year graduation rates for 15 other public research universities and three University campuses, the University's three-campus sample ranks sixth from the top. Of the 15 other institutions, the University of Virginia and the University of North Carolina report the two highest four-year graduation rates (76 and 54 percent, respectively, for their entering classes of 1982), while the Universities of Washington and Minnesota report the lowest (22 and 17 percent for their entering classes of 1978 and 1977). No independent research universities appear on the list.

What factors affect the undergraduate timespan in other research universities that have shorter average timespans than the University of California? It is understandable why the University's data about other institutions deal only with their graduation rates and not with students' reasons for spending longer than four years, since the research literature contains little or no self-report from students about this experience. The University report has suggested that "there is no real relationship between high four-year graduation rates and the [students'] cost of an education" (p. 23f), but there is still insufficient evidence on this point. Yet the differences in graduation rates for some public *and* independent institutions compared to the University appear large enough to deserve exploration by the University. It would seem helpful to know what practices of other research universities, such as Stanford and several of the University's public comparison institutions, account for their higher five-year graduation rates.

3 The State University's Report

Methodology and sample characteristics

In the fall of 1987, the California State University sent a questionnaire from Chancellor Ann Reynolds to 3,590 of its spring 1987 graduates on seven campuses. (This questionnaire is reproduced on pages 20-23 of the State University's report attached to this document.) All of these graduates had been identified as students who took longer than four years to complete their degree programs. Some 40 percent (1,450) responded, and more than half of these took time to add comments beyond their basic answers to the 38 question items.

The State University questioned its sample about all those factors listed by the Legislature and added several more to comprise a list of 20 factors that could contribute to delaying a student beyond four years (Table 4, page 7, of the State University report). Five of the items dealt with financial and employment aspects, three with personal and family concerns, and the remainder were grouped as the "educational planning" cluster, including both student-caused and institution-caused delaying factors (page 22 in the State University's report).

The State University's report does not attempt to compare these factors with those studied at other universities of comparable profile, since, as mentioned earlier, there is little published information of this nature available.

Nonetheless, the report provides substantial background on the State University's responding graduates. We learn, for example, that on each of the seven campuses sampled, between 50 and 60 percent of the graduates had transferred in from another institution, and that nearly 95 percent of the total sample had been "regular admits." Other features of the sampled students include the facts that over 40 percent said they had anticipated taking five or more years to graduate, and that almost 59 percent took from five to 6.5 years in doing so, while only 3 percent completed in "more than four but less than five" years.

In its report, the State University points out that, as defined for financial aid and for student purposes, carrying the minimum "full-time courseload" (12 units) each term "would result in a minimum time of five years" to complete the degree program.

Survey findings

Comparisons among factors

The State University displays its findings regarding the ranking of factors in Table 4 on page 7 of its report (reproduced as Display 4 on the next page of this document). For each factor, it computed an "index of importance," as did the University of California, by combining all the students' ratings of it, so its report does not include the percentage of respondents rating each factor as a "3" for "extremely important" or a "2" for "moderately important," or of less influence on stretching their time to graduation. It has provided the Commission, however, with a table showing the headcount of those scoring each item, and the percentages calculated from that table are reproduced as Display 5 on page 15.

Display 4 shows that two-thirds of the respondents reported that they had carried a "reduced courseload at some time"; that for over 63 percent, a reduced courseload was caused by the need for employment; and that 68 percent indicated that they had "desired" to combine work and education. Display 5 shows with even greater emphasis the importance of the need for employment in reducing the respondents' workload: more of them rated this factor as "extremely important" in taking more than four year to graduate than any other item. Clearly, a large majority of State University students face financial realities by planning to pay as they learn.

Almost as large a proportion of the students -- 62.4 percent -- say they experienced delays from difficulties in getting courses required for their major; and well above half cited difficulties in scheduling general education courses. A majority cited taking

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DISPLAY 4 *Reasons for Having Taken More Than Four Years to Graduate, Ranked by Importance as Reported by a Sample of 1987 Graduates Surveyed by the California State University*

	Index of Importance[1]	Percent Citing as a Factor
1. Carried a reduced courseload at some time during your college years	1.419	65.9%
2. Desired to combine work and education	1.390	68.3
3. Reduced courseload caused by need for employment	1.383	63.6
4. Difficulties in getting courses required for your major	1.234	62.4
5. Difficulties in scheduling general education courses	1.077	56.9
6. Change of major	.998	45.6
7. Intentionally took extra courses beyond requirements for your degree	.938	51.2
8. Transferring between colleges	.867	39.8
9. Other[2]	.852	30.2
10. Family concerns	.839	39.3
11. Wished to take time off from college for other experiences	.676	31.1
12. Delays caused by evaluation of courses necessary to complete the final requirements for a degree	.674	37.6
13. Academic difficulties with particular courses	.657	39.5
14. Financial aid	.419	19.6
15. Delay to prepare for internship, student teaching, or other programs	.321	16.9
16. Remedial coursework	.278	17.4
17. Child care difficulties	.216	9.1
18. Delays caused by the graduation writing assessment requirement	.106	6.7
19. Delays caused by the Entry Level Math (ELM) requirements	.093	5.4
20. Delayed graduation to defer repayment of government loans	.046	3.0

[1] Computed by multiplying the number of graduates who assigned a given value code to each reason by the weight of that value (0, 1, 2, or 3) and dividing that sum by the total number of graduates responding.

[2] Includes inadequate guidance and counseling, indecision about goals, administrative problems, or some variation of the other reasons listed.

Source: Adapted from Table 4, page 7, of the California State University's report, *Factors Affecting the Time to Degree*, appended to this document as the second attachment.

DISPLAY 5 *Importance of 20 Factors in Taking More Than Four Years to Graduate, According to a Sample of 1987 Graduates Surveyed by the California State University*

Rank	Reason for Additional Time	Percent Citing As a Factor	Not a Factor (0)	Slightly Important (1)	Moderately Important (2)	Extremely Important (3)
1.	Carried a reduced courseload at some time during your college years	65.8%	34.0%	17.3%	21.2%	27.4%
2.	Desired to combine work and education	68.1	31.7	19.2	27.4	21.7
3.	Reduced courseload caused by need for employment	63.5	36.4	16.5	19.3	27.7
4.	Difficulties in getting courses required for your major	62.4	37.6	20.9	22.0	19.5
5.	Difficulties in scheduling general education courses	56.7	43.1	21.9	19.1	15.7
6.	Change of major	45.6	54.4	10.9	15.2	19.5
7.	Intentionally took extra courses beyond requirements for your degree	51.1	48.9	21.0	17.6	12.5
8.	Transferring between colleges	39.8	60.2	10.0	12.7	17.1
9.	Other•	30.6	69.4	0.4	5.0	25.2
10.	Family concerns	39.2	60.8	11.4	11.1	16.7
11.	Wished to take time off from college for other experiences	30.9	69.1	8.6	8.3	14.0
12.	Delays caused by evaluation of courses necessary to complete the final requirements for a degree	37.6	62.4	17.2	11.1	9.3
13.	Academic difficulties with particular courses	39.5	60.5	20.0	12.9	6.6
14.	Financial aid	19.6	80.4	5.3	6.0	8.1
15.	Delay to prepare for internship, student teaching, or other programs	16.9	83.1	7.0	4.5	5.3
16.	Remedial coursework	17.4	82.6	9.4	5.6	2.4
17.	Child care difficulties	9.2	90.8	2.0	2.3	5.0
18.	Delays caused by the graduation writing assessment requirement	6.7	93.3	4.1	1.4	1.2
19.	Delays caused by the Entry Level Math (ELM) requirements	6.1	93.9	2.5	2.5	1.1
20.	Delayed graduation to defer repayment of government loans	3.0	97.0	1.9	0.7	0.4

• Includes inadequate guidance and counseling, indecision about goals, administrative problems, or some variation of the other reasons listed.

Source: Adapted from data provided by the Division of Analytic Studies, Office of the Chancellor, The California State University.

courses beyond their requirements as a delaying influence.

When the data are displayed as in Table 4 of the State University's report, there appears a 10 percent step-jump down to the next rankings of factors. Seen by themselves, however, these next rankings represent large numbers of students delayed: About four of every ten graduating after more than four years experienced the following as delaying influences:

Transferring between colleges	39.8%
Academic difficulties with particular courses	39.5
Family concerns	39.3

Here a surprise appears that shows 37.6 percent citing another delay of an institutional process sort: delays caused by the screening evaluation of a student's readiness to graduate, "being on track."

Unfortunately, at that point, the item "Other" (30.2 percent) combines student laments about inadequate advising with other administrative problems and personal indecision about goals, so we cannot discern the precise magnitude of the felt need for better academic advice.

At the lower end of the rankings, yet still representing significant numbers of persons, are those citing child care difficulties (9.1 percent), delays caused by the graduation writing assessment and entry level math assessment (6.7 and 5.4 percent).

There was no item on the questionnaire, such as in the University of California's survey, for the factor of repeating courses.

The report discusses the widely known fact that certain majors normally result in or require a more-than-four year program of studies. Its Bachelor of Architecture is defined as a five-year degree. The Bachelor of Engineering is, *de facto* for most students, a five-year degree since it requires an average of 17½ units per term without faltering in order to be completed in four years or eight semesters. The report does not tell, however, what portion of the total "more-than-four-year" phenomenon is accounted for by these particular majors or degrees earned.

Three of every five respondents to the survey replied that, at some time, they had taken fewer than 12 units (a part-time courseload) per semester. It is clear and important knowledge that most State University students cannot afford extracurricular activity -- besides work and family -- if they hope to graduate on the shortest schedule allowable by their major field requirements.

Comparisons among campuses

In a special section, the report analyzes differences among the seven campuses as reflected in the survey responses. On some matters they show great variations; for example, regarding delays from difficulties getting required courses either for general education or the major, Fresno scored consistently low while San Diego scored consistently high, while students at Dominguez Hills reported much difficulty getting major requirements but not so much with getting general education courses. Across all seven campuses, however, "the factors that combine work, education, and a reduced courseload are still rated among the highest on each campus" (p. 15).

Also, difficulties getting requirements for the major appear uniformly high at all campuses. Family concerns rated extremely high as delaying influences at Bakersfield; at San Luis Obispo, trouble getting general education courses rated extremely high both internally and in comparison with other campuses.

The State University's conclusions

In its summary, the State University report addresses its findings in two categories: (1) those factors that may be more subject to student control, and (2) those more subject to remedial action by the institution.

The State University points out that to acquire the minimum of 124 semester units to graduate with a Bachelor of Arts degree in four years, a student must take an average of 15.5 units per semester for eight semesters -- without "excess electives" and with "no change of major, no remedial courses, etc." (p. 18). Yet the actual average number of units completed per year is 22.5, or approximately 11 per semester (allowing for some who attend Summer Session). "Thus, . . . a student taking an average load will take 5.5 years to complete a minimal B.A. program." It then reminds the reader of the many necessary and worthwhile things going on concurrently in students' lives, and it states that the students who responded to the survey "did not wish to be constrained to a defined time base nor a defined unit load," but needed flexibility for a variety of responsible tasks.

The State University lists five factors -- "perceived impediments toward timely completion of degree requirements" -- that derive from university policies and procedures. Numbered as they appear in the rankings of Table 4, these are:

4. Difficulties in getting courses required for your major.
5. Difficulties in scheduling general education courses.
8. Transferring between colleges.
9. Inadequate guidance and counseling.
12. Delays caused by evaluation of courses necessary to complete the final requirements for a degree.

Item 9 here comes from Questionnaire Item 20, "other, please specify," and is particularly interesting because student respondents mentioned the lack of adequate guidance and counseling so frequently without the prompting of such words on the questionnaire checklist.

The State University concludes its report with a brief discussion of what it is doing about each of these five institution-focused factors. It notes, for instance, that the reported student difficulties of getting required courses on time stem from two different problems: (1) "the general unavailability of sufficient course sections," and (2) lack of flexibility in student schedules because of employment. It promises that course scheduling practices are being reviewed for improvement at each campus.

As another key example, the State University is addressing the need for better academic guidance and counseling first through training sessions for faculty members, and then through increased peer counseling and other counseling services.

Commission comments

The State University's survey has yielded a rich body of new information about why its graduates take longer than four years to complete a bachelor's degree program. Together with the companion University of California survey, it appears to be unparalleled anywhere in the research literature, and it reveals the difficulties that many Californians encounter in earning their first collegiate degree while engaged in all the responsible tasks of adult life, thus stretching out their studies over five, six, or more years. Certainly, the State University data demonstrate why the term, "four-year degree" has become a misnomer for the large majority of students in California's public universities.

Employment and financial aid

The way students were asked about "employment during the years (they) attended the university" (Questionnaire, items 13, 14) does not permit an inference that all 90 percent worked throughout all or most of their semesters in the State University. Nevertheless, the fact that nearly three-fourths worked, for some time, at least 20 hours per week while studying, and that nearly one-fifth held a full-time job commands attention to the present-day "student experience." Forty-seven percent rated as "extremely" or "moderately important" that they had reduced their courseload because of employment.

The working student has become such a familiar fact of life in the State University that the Legislature's one factor for inquiry, "lack of funds," became subsumed mostly under inquiries about student employment. While it is true that the questionnaire (Item 5) asked whether "financial aid" had contributed to taking more than four years to graduate, one cannot say with any assurance that the student-respondent saw this as meaning *lack of* financial aid, *delays in receiving* financial aid, or some third interpretation. In any case, the small response citing this as a delaying influence (19.6 percent) argues that the preponderance of State University students look more toward employment than to financial aid to see them through college.

Whether increased financial aid actually would stem the widespread reducing of student courseloads in the State University cannot be determined from this survey, but the new information surely brings up the question. As mentioned earlier, only 19.6 percent of the respondents said that "financial aid" had helped to delay their progress; but among ethnic minority respondents the percentage was 33.3 percent and the highest rating given *any* item at *any* campus is the rating of "reduced courseload for employment" given by graduates from Dominguez Hills.

In the midst of it all, a majority of these students still took courses beyond the minimum requirements for their degree, indicating interest in more than just a diploma.

Clusters of factors

The way in which the responses cluster about certain types of factors and in "step jumps" of the percentages checking them -- several around the 60 percent level of response, for example, then several around the 40 percent level, etc. -- helps to underscore the stability of certain findings about delayed graduation in the State University. According to the sample of recent graduates, who after all represent the real "veterans" of the system, the second greatest cause of their stretching the baccalaureate program is the difficulty of getting the required classes on time, especially those required for the major.

The State University has parsed this latter problem into (1) questions about the student's own work schedule, which limits the individual's flexibility, and (2) questions about availability of sufficient course sections in certain majors and departments. The State University should find it of help for resolving the problem to have arrayed its data on "difficulty of getting required major courses" and ". . . required general education courses" by campus; but the problems seem relatively high on nearly all the campuses sampled. It is interesting that the campus with the least work-related delays has, evidently, the most delays due to scheduling difficulties (cf. Table 6, p. 16); so the problem ought not be ascribed too much to the inflexible employment schedule of students.

The "grad check" (evaluation of courses necessary to complete final requirements for degree) as a required State University procedure was cited by 37.6 percent of all respondents as a delaying influence; it was cited, however, by over 47 percent of ethnic minority respondents. Were this figure combined with those who commented on the need for better or earlier advising (in "other"), it would produce an even more formidable factor generally focused on academic advising. In its conclusions, the State University indicates that it takes seriously the overall problem as reported by those who successfully completed degrees. For help in meeting this problem, it seems wise to turn first to the faculty -- the first line of regular contact -- then to other types of advising services, including peer counseling.

The State University was not mistaken to inquire about delays due to "academic difficulties with particular courses," but now that such a high percentage acknowledged that as a delay (39.5 percent of all respondents, 51.6 percent of ethnic minorities) it would be helpful to find out more precisely what difficulties caused actual delays. For example, failing a course does not in itself cause delay, but repeating a course for a better grade might cause delay. Repetition of courses involves a question of institutional policy, so this detail seems relevant.

Selected majors

The report points out early (p. 8) that the Bachelor of Architecture program is defined as a five-year program, and that the Bachelor in Engineering, with a minimum requirement of 140 semester units, or 13 percent more than the minimum for a B.A., could only be completed in four years by successfully completing 17½ units each term (on average) for eight consecutive semesters. Other degrees carry a higher unit requirement, too, than the basic 124 for a B.A. While it is helpful to have that information in mind, we cannot learn from the report what portion of the "more-than-four-year" phenomenon may be accounted for primarily by the particular majors chosen. That is, if we knew that 20 percent of the "delayed graduates" had majored in either engineering or architecture, we might conclude that essentially explained or accounted for 20 percent of the "more-than-four" phenomenon. On the other hand, such information also reminds us of the issue, already familiar to faculties, concerning pressures to include increasing amounts of professional subject matter in an undergraduate major. While this in large part remains a curricular matter, it obviously concerns other issues such as student costs, public costs, and the meaning of the baccalaureate. It seems clear by now that the requirements for earning certain bachelor's degrees at public universities have made the term, "four-year degree" (or "four-year institution") a misnomer and, for some portion of the public, perhaps a misleading one.

Commission conclusions

Not only has the State University responded well to the Legislature's request for information, but it also has reported what it is doing or plans to do toward resolving institutional matters which tend to delay student progress to the baccalaureate. The Office of the Chancellor is to be commended for its straightforward approach and follow-through in this effort, once it undertook its survey.

The study has helped identify two remaining and difficult issues: financial aid and "top-loaded" majors. Neither can be resolved by the State University alone. There is more than a hint here of an urgent need by students for more flexibility in awarding student aid grants but, since that extends beyond the bounds of this study, it is difficult to elaborate on this general observation. Also, the choice of academic major clearly wields an influence on whether a student has a realistic chance to finish in nine, ten, or even eleven semesters.

While it remains important for new student applicants to be apprised of the actual number of units and the time required before committing to a particular major concentration, the issue looms larger than providing proper information on time to students and their families. One question involves how far to "professionalize" the bachelor's as the first academic degree and this topic is under current discussion by accrediting bodies. A corollary question concerns how to ensure that graduates receive regular opportunities for continuing education in their chosen specialty. Both these questions lead beyond the bounds of this study, but the issue they represent -- the lengthening requirements for a baccalaureate degree -- will continue to grow until ways are found to resolve it at levels beyond that of the individual institution.

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November 13, 1987

FACTORS INFLUENCING STUDENT PACE TOWARD ACQUISITION OF THE BACCALAUREATE DEGREE AT THE UNIVERSITY OF CALIFORNIA

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INTRODUCTION

Supplemental Language for Budget Item 6420-001-001 stipulated that the University of California

> shall conduct studies to sample student opinion about factors which contribute to taking longer than four years to receive a baccalaureate degree. Each study shall sample graduates or prospective graduates of the Spring of 1987 and shall include a representative sample of campuses and students who have taken five years or longer to complete the baccalaureate degree. Each study should include, but not be limited to, consideration of the following factors: availability of general education courses; availability of major required courses; admission status; employment; transfer--how many changes of institution;[1] remedial coursework; double majors; lack of funds; change of major; reduced courseload; a comparison of time to degree at comparable universities, including those in other states.

In response to this Supplemental Language, the University of California submits the following report on students who take longer than four years to receive a baccalaureate degree. Data relating to the factors influencing the pace at which undergraduate students complete their undergraduate degree requirements have been drawn from surveys of students graduating at three campuses of the University of California--Davis, Los Angeles, and Riverside.

METHODOLOGY

In order to address the questions posed by the budget language, three University of California campuses--Davis, Riverside, and Los Angeles--were chosen to represent academic environments of varying sizes. UC Los Angeles is the largest campus with an undergraduate enrollment of 21,800; UC Davis is the fourth largest campus with an enrollment of 13,800; and UC Riverside is the smallest campus with an enrollment of 7,600.[2]

A self-administered questionnaire was mailed to 893 students randomly selected from the graduating classes of 1987, at UC Davis and UC Riverside respectively, who took more than four calendar years to complete the baccalaureate degree.[3] The same self-administered questionnaire was mailed to Davis and Riverside students who took more than four years to graduate since these campuses provide students with relatively similar academic environments. Accordingly, the data from the Davis and Riverside campuses are analyzed together.[4]

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[1] The frequency of changes of institution is not discussed directly since the number of students who transferred more than once constituted a statistically insignificant population.

[2] All figures are based on Fall 1986 enrollment data.

[3] 372 questionnaires were returned for a response rate of 42 percent.

A telephone survey was conducted of 89 students randomly selected from the graduating class of 1987 at UC Los Angeles who took more than four years to complete the baccalaureate degree. For purposes of comparison, a group of 31 students who completed their undergraduate studies within four years was also surveyed. The survey was administered by trained interviewers of the Institute for Social Science Research at UC Los Angeles.[5] This approach calls for a different methodology and size of subject population than that used for the other two campuses. Interviewers recorded verbatim open-ended responses where possible. Telephone interviews permit greater flexibility than self-administered questionnaires in asking questions and clarifying ambiguous answers. When an item is not understood the interviewer can repeat it, while in the self-administered form it might simply be skipped. More importantly, the interviewer can improve the quality of the data by probing for added detail when a response is incomplete or seemingly irrelevant. As a research strategy, the personal interview thus requires fewer respondents to obtain reliable information.

The Davis and Riverside respondent characteristics are as follows. Ethnicity: Asian 18.6 percent, Black 4.1 percent, Hispanic 5.4 percent, White 67.8 percent, Unknown 4.5 percent. Gender: 53.8 percent female; 46.2 percent male. Transfer Status: 91.1 percent native students; 8.9 percent transferred from another institution. Admit Status: 92.1 percent regular; 7.9 percent special action. Major: Natural Science 27.5 percent; Social Science/Humanities 50.1 percent; Engineer 13.2 percent; Other 9.2 percent. The Los Angeles respondent characteristics are as follows. Ethnicity: American Indian 2.4 percent; Asian 22.6 percent; Black 6.0%; Hispanic 10.7 percent; Filipino 9.5 percent; White 48.8 percent. Gender: 43.8 percent female; 56.2 percent male. Admit Status: 92.1 percent regular; 7.9 percent special action.

The survey questionnaire mailed to students at the Davis and Riverside campuses contained a list of nineteen possible reasons for taking more than four years to graduate. Students were asked to indicate all factors that affected their progress toward completion of baccalaureate degree requirements and to rate these factors on a four point scale of importance (0=not a factor; 1=slight influence; 2=important; 3=very important).

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[4] A copy of the questionnaire is included in the Appendix.

[5] A copy of the interview schedule is included in the Appendix.

In order to facilitate a comparative understanding of the relative significance of the nineteen factors included in the survey used for Davis and Riverside, each item was ranked by means of an index of importance (See Table 1). This index was computed by multiplying the number of persons assigning a given code by the weight assigned to that code (i.e., 0=not a factor; 1=slight influence; etc.) and dividing the sum of these products by the total number of persons responding. This weighted measurement of responses may be compared with frequency counts for each item influencing student progress toward completion of baccalaureate degree requirements (See Table 2).

We found that the responses of Davis and Riverside students to the nineteen possible reasons for taking more than four years to graduate clustered into the following five categories: Institutional--need better advising, trouble getting major requirements, trouble getting general education requirements (Table 3); Financial--need to work, ran out of money, lack of child care (Table 4); Educational and Curricular--change of major, reduced courseload, repeat courses, internship, double major, remedial coursework (Table 5); Extra-Curricular Education--take extra courses out of interest, time off to work (i.e. for curricular reasons, not financial [see above]), athletic activity, travel (Table 6); Family and Health--stress, family/marital issues, personal health problems (Table 7).

These five categories reflect the patterns suggested by the student responses themselves. They were utilized in the analyses to organize the mass of information that has been generated by this survey, and to assist in the interpretation of the findings of the study. The responses to each of the items of the survey were also tabulated according to the identifiable sub-populations of ethnicity, admit status, and transfer status.[6]

The five categories also provide a useful heuristic device for addressing the issues raised in the supplemental language, viz., the availability of general education courses, employment, the availability of courses required in the major, remedial coursework, double majors, reduced courseload, admission status,

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[6] There were not major variations among these sub-populations in terms of their respective responses to reasons for taking more than four years to graduate. In the few areas where there were significant variations among the sub-populations, these are noted and discussed.

TABLE 1

REASONS FOR TAKING MORE THAN FOUR YEARS TO GRADUATE

Reason for Additional Time	Index of Importance*	Percent Citing As A Factor**
1. Took extra courses out of interest	1.40	65.9%
2. Needed to work	1.32	59.2%
3. Change of major	1.30	59.4%
4. Reduced courseload	1.13	51.3%
5. Needed better advising	0.97	47.3%
6. Stress	0.82	37.9%
7. Repeating coursework	0.73	46.0%
8. Time off to work	0.58	24.3%
9. Ran out of money	0.56	25.9%
10. Trouble getting major requirements when needed	0.55	35.2%
11. Family/marital issues	0.51	24.5%
12. Internship program	0.43	24.8%
13. Double major	0.38	16.9%
14. Athletic activity	0.38	16.2%
15. Personal health problems	0.35	18.5%
16. Time off to travel	0.26	14.5%
17. Remedial coursework	0.18	13.9%
18. Trouble getting general education requirements when needed	0.16	11.3%
19. Lack of child care	0.04	2.1%

*To facilitate comparisons of the relative significance of each factor, an index of importance was computed by multiplying the number of persons assigning a given code by the weight assigned to that code (i.e., 0=not a factor; 3=very important) and dividing the sum of these products by the total number of persons responding.

**Percent of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

TABLE 2

PRECIPITATING FACTORS IN TAKING MORE THAN FOUR YEARS TO GRADUATE

Scale: 0 - Not a factor 1 - Slight Influence
2 - Important 3 - Very important
(N = 372)

1. Took extra courses out of interest
0. 34.1% 1. 18.3% 2. 20.2% 3. 26.9%

2. Needed to work
0. 40.9% 1. 12.4% 2. 20.4% 3. 26.3%

3. Change of major
0. 40.6% 1. 16.9% 2. 14.8% 3. 27.7%

4. Reduced courseload
0. 48.7% 1. 11.0% 2. 19.1% 3. 21.2%

5. Needed better advising
0. 52.7% 1. 14.0% 2. 17.2% 3. 16.1%

6. Stress
0. 62.1% 1. 9.7% 2. 12.9% 3. 15.3%

7. Repeating coursework
0. 54.0% 1. 28.2% 2. 8.9% 3. 8.9%

8. Time off to work
0. 75.8% 1. 3.8% 2. 7.3% 3. 13.2%

9. Ran out of money
0. 74.2% 1. 7.8% 2. 6.5% 3. 11.6%

10. Trouble getting major requirements when needed
0. 66.9% 1. 16.4% 2. 11.3% 3. 5.4%

11. Family/marital issues
0. 75.5% 1. 7.8% 2. 7.0% 3. 9.7%

12. Internship program
0. 75.3% 1. 13.2% 2. 5.1% 3. 6.5%

13. Double major
0. 83.9% 1. 3.0% 2. 4.3% 3. 8.9%

14. Athletic activity
0. 83.9% 1. 3.0% 2. 4.3% 3. 8.9%

15. Personal health problems
0. 81.5% 1. 7.8% 2. 4.8% 3. 5.9%

16. Time off to travel
0. 85.5% 1. 5.4% 2. 4.0% 3. 5.1%

17. Remedial coursework
0. 86.0% 1. 10.2% 2. 3.2% 3. 0.5%

18. Trouble getting general education requirements when needed
0. 88.7% 1. 8.1% 2. 1.9% 3. 1.3%

19. Lack of child care
0. 97.8% 1. 0.8% 2. 0.5% 3. 0.8%

and transfer status. Within each of the categories, answers to the supplemental language questions are discussed, followed by the other issues identified by student respondents. The categories, as well, are suggestive of those programmatic areas in need of institutional attention (i.e., financial aid, academic advising services, personal counseling services, and additional classroom space) thus enabling the University to gauge its effectiveness in assisting students to complete degree requirements.

In the discussion that follows, each topic is developed by summarizing the most relevant information from the structured questions of the surveys and by quoting from the statements of respondents who addressed that particular issue in their written remarks. These statements were selected to represent the range of ideas, opinions, and feelings expressed by the entire population of respondents. In addition to the questions raised in the supplemental language, this report also addresses the following issues relevant to understanding undergraduate pace toward graduation at the University of California: How do students' ethnicity, admission status, and transfer status affect their degree progress? How do students who take additional time differ from students who graduate in four years? To what extent does taking additional time reflect voluntary choice, financial constraints, or an institutional deficiency? To answer these questions, the analysis of University student responses has been augmented by reference to the appropriate scholarship on undergraduate education. As suggested by the review of this literature, the phenomenon studied here is not limited to the State of California.

FINDINGS: WHY STUDENTS TOOK LONGER

The data indicate relatively minor differences between students graduating within four years and those taking additional time in terms of the average number of baccalaureate units accrued. At UC Davis, the average number of units accrued by all entering freshmen graduating in 12 quarters (4 years) was 187.2; in comparison, the average number of units accrued by all entering freshmen requiring 15 quarters or more (5 years or more) to graduate was 195.1. Similar figures were reported for the Los Angeles and Riverside campuses: at Los Angeles, the average 12 quarters and 15 quarters or more unit total was 185.2 and 188.3 respectively; at Riverside, the average 12 quarters and 15 quarters or more unit total was 189.2 and 190.6 respectively.[7]

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[7] Davis and Los Angeles figures are for the freshman class entering 1982-83; Riverside figures are for the freshman class entering Fall 1981.

Institutional Factors[8]

The Davis and Riverside students identified three institutional factors leading, to some extent, to a delay in completing degree requirements within four years: the need for better advising; difficulty getting into classes fulfilling major requirements; and trouble fulfilling general education requirements. The survey found that 47 percent, 33 percent, and 11 percent, respectively, of those students who took more than four years to graduate indicated that these three institutional factors contributed in some way to their delayed degree completion (Table 2). That is, students mentioned these causes as "contributing factors." As Table 1 suggests, however, when ranked by the importance students assigned to them, these reasons registered as #5, #10 and #18, respectively, on a list of 19 reasons.

The primary institutional factor, identified by students as contributing to a delay in degree progress, is the need for better advising services to assist them in the clarification of their life and career goals, and in the development of educational plans for the realization of these goals. In part, the "lack of institutional support" may relate to student choice as well as administrative decisions. As one UCLA student put it,

> I needed more frequent academic counseling and more department counseling in the majors. It ought to be required [rather than optional at the student's choice]. Students should be assigned a counselor or advisor and see them at least 2 or 3 times a quarter.

It is interesting to note that while there is relatively little variation between ethnicities in their perceived need for better advising services, underrepresented minorities and special admits experienced significantly less difficulty enrolling in courses required for their major or those courses fulfilling general education requirements (Table 3).[9] This may relate to the fact that, as a result of a recent Universitywide expansion of student services specifically designated for affirmative action students, such students received more intensive advising. An expansion of

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[8] This section addresses supplemental language questions on the availability of general education and major required courses. Other institutional issues are discussed as well.

[9] Evidence from a 1985 survey of UC Berkeley students who had taken fewer than 15 units at some point during their undergraduate education indicated that less than 1% of the respondents did so because of the unavailability of needed classes (University of California, Berkeley 1987).

TABLE 3

INSTITUTIONAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ETHNICITY

	Type of Factor*		
Ethnicity	Need Better Advising	Trouble Getting Major Requirements	Trouble Getting General Education Requirements
Underrepresented Minority	46%	20%	0%
White	45%	34%	12%
Asian	57%	36%	16%

INSTITUTIONAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ADMIT STATUS

	Type of Factor*		
Admit Status	Need Better Advising	Trouble Getting Major Requirements	Trouble Getting General Education Requirements
Regular	48%	34%	12%
Special	38%	28%	0%

INSTITUTIONAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY TRANSFER STATUS

	Type of Factor*		
Transfer Status	Need Better Advising	Trouble Getting Major Requirements	Trouble Getting General Education Requirements
Transfer	44%	37%	16%
Non-Transfer	47%	32%	11%

*Percentages refer to the proportion of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

student services for the general student population might well bring similar results.

Other institutional factors identified as contributing to some degree to a delay in progress toward the degree include difficulty getting into classes fulfilling major requirements, and trouble getting into classes fulfilling general education requirements. These two reasons, however, only counted as reason number 10 and reason number 18 of the 19 available: students do not see this as a critical issue, by any means. It is important to note, moreover, that trouble enrolling in required coursework is not a problem unique to students who take more than four years to graduate (Table 9). As indicated by the Los Angeles study, students who graduated within four years and those who took more than four years both experienced similar levels of difficulty in finding required classes open for enrollment.

Financial Factors[10]

The factor cited by students as the second most influential factor affecting their progress toward the degree is financial: nearly 6 out of 10 students indicated that the need to work prolonged their undergraduate careers (Table 1). An additional indicator of financial considerations is found in the fact that slightly more than 1 in 4 students also cited "running out of money" as a precipitating factor (Table 1). Thus financial factors figured as reasons #2 and #9 on the index of importance (Table 2). As should be expected, students from families more frequently clustered on the lower end of the socioeconomic ladder (i.e., underrepresented minorities, special admits, and transfers) experienced greater financial need (Table 4).[11] The comments of a Black female mechanical engineering student are suggestive of the financial burdens experienced by many students:

> I had to work 25 hours per week to support my family. Unfortunately, I did not have parents or relatives to help me out. As a result, I could not always take a full course load. All in all, I had a hard time; you

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[10] This section addresses budget language questions on employment and lack of funds, as well as other issues that emerged from the surveys.

[11] This data was corroborated by a 1985 survey of UC Berkeley students which found that the need to work was the most frequently mentioned factor when asked about reasons for taking reduced courseloads (University of California, Berkeley 1987).

TABLE 4

FINANCIAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ETHNICITY

	Type of Factor*		
Ethnicity	Need to Work	Ran out of Money	Lack of Child Care
Underrepresented Minority	69%	34%	6%
White	59%	24%	25%
Asian	54%	22%	0%

FINANCIAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ADMIT STATUS

	Type of Factor*		
Admit Status	Need to Work	Ran out of Money	Lack of Child Care
Regular	58%	25%	2%
Special	69%	41%	10%

FINANCIAL FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY TRANSFER STATUS

	Type of Factor*		
Transfer Status	Need to Work	Ran out of Money	Lack of Child Care
Transfer	65%	47%	14%
Non-Transfer	58%	21%	1%

*Percentages refer to the proportion of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

> wonder if there is a light at the end of the tunnel. All I could do was try hard and not give up. I had to not think about tomorrow's financial problems. Please, remember not everyone comes from families where everything is paid for. Consider the non-regular students.

Educational and Curricular Factors

A variety of curricular concerns affect students' time to degree (Table 5). The most prominent of these include: (a) change of major; (b) double majors; (c) participation in internships or similar curricular off-campus experiences; and (d) reduced courseload to improve grades.[12] (We might note that in addition to these curricular concerns expressed by students, another educationally-related factor refers to levels of academic preparation. This point is discussed below.)

Change of Major: Nearly six out of ten Davis and Riverside students surveyed cited a change of major as a precipitating factor influencing their degree progress (Table 1). Similarly, nearly one-half of Los Angeles students surveyed indicated a change of major at least once during their undergraduate career (Table 9).

If a student elects to change the major field of study, this may require some "re-tooling" (i.e., taking additional required courses in the major) in order to master the intellectual substance, style, and methods of the newly selected field. Such a change often necessitates a delay in the "normal" four year progress toward completion of bachelor's degree requirements. The experience of the following student points to the difficulties prompted by a change of major:

> I began my education as a physics major and maintained a solid "B" average for three years. However, I found that my true interests were in working with juvenile delinquents. After working for two summers with a juvenile probation department, I decided to switch majors to a field that would prepare me for a career in juvenile justice. This meant taking a large number of courses in order to satisfy both college and departmental requirements. There is no way in hell I could have graduated in four years.

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[12] Topics a, b, and d address budget language questions.

TABLE 5

EDUCATIONAL AND CURRICULAR FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ETHNICITY

Type of Factor*

Ethnicity	Change of Major	Reduced Courseload	Repeat Course	Internship	Double Major	Remedial Coursework
Underrepresented Minority	60%	43%	57%	26%	20%	17%
White	58%	38%	43%	24%	16%	12%
Asian	68%	44%	52%	29%	15%	22%

EDUCATIONAL AND CURRICULAR FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ADMIT STATUS

Type of Factor*

Admit Status	Change of Major	Reduced Courseload	Repeat Course	Internship	Double Major	Remedial Coursework
Regular	60%	40%	46%	26%	17%	14%
Special	59%	34%	48%	17%	7%	10%

EDUCATIONAL AND CURRICULAR FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY TRANSFER STATUS

Type of Factor*

Transfer Status	Change of Major	Reduced Courseload	Repeat Course	Internship	Double Major	Remedial Coursework
Transfer	56%	37%	58%	26%	2%	14%
Non-Transfer	60%	40%	45%	25%	18%	14%

*Percentages refer to the proportion of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

Double Major: The number of students pursuing bachelor's degrees simultaneously in multiple disciplines has also increased in recent years. Nearly one in five Davis and Riverside students surveyed indicated that a double major influenced their degree progress (Table 1). Another insight is provided by the data from Los Angeles, where the proportion of students with a double major who took more than four years to graduate was approximately two and one-half times as great as those students with a double major who graduated on time (Table 9).

The increased incidence of students pursuing a double major may be traced, in large part, to graduate and professional school admission criteria which place greater emphasis upon undergraduate student acquisition of a broad-based academic background. Students with a double major must take a second set of courses emphasizing fundamental skills at the lower division level, as well as meet the course requirements of the departmental curriculum at the upper division level. Needless to say, these students frequently require additional academic time to meet the requirements of multiple disciplines. While these options broaden and enrich a student's education, and make them more competitive for postgraduate training, they also lengthen the time to graduation.

Reduced Courseload: Slightly more than 50 percent of the students surveyed indicated that they were taking a reduced courseload in order to put more effort into fewer units to ensure good grades (Table 1). As a UC Riverside student commented:

> I only took 12 units a quarter.[13] Science courses are so competitive and demanding and to do well, I can only take 12 units.

This practice occurs more frequently, given the increased pressure for entrance to graduate and professional schools, which in turn is reflected in student anxiety about grades and scores. Even students looking for entry-level jobs immediately upon graduation think good grades will help them secure better jobs; thus careerism, too, leads to a study list with reduced units. Anecdotal evidence from counselors also suggests that many students are now being advised by academic and career counselors to take reduced courseloads, thus deferring graduation beyond the customary four years.[14]

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[13] It should be noted that Federal financial aid regulations define this as a full load.

Internship Programs: Approximately 25 percent of the students surveyed cited participation in an internship program as a contributing factor to taking more than four years to graduate (Table 1). Some students have made fairly substantial commitments to a particular career and seek ways to facilitate progress in it. Internship programs provide an opportunity for students to develop or perfect job-related skills, establish contacts or relationships with persons who may aid their career development, and in other ways improve and enhance their qualifications and credentials for eventual employment and professional development. In addition, an internship enables a student to test his or her career objectives, however tentative, through active involvement in a work setting. The comments of a political science major at UC Davis are illustrative of the value of the internship experience:

> I received an internship in a Congressional office in Washington, D.C. After completing the internship I was offered a full-time staff position for another year. The experience during my year off from school was an invaluable and unique chance to apply some of my class work in the real world as well as explore the possibility of working for a legislator after graduation.

Extra-Curricular Education Factors

While the foregoing issues were identified in the budget language, students themselves often expressed a different emphasis. The most salient factor identified by students as influencing their progress toward the degree was the desire to take additional courses out of "personal interest;" nearly 7 out of 10 students surveyed cited this as a factor (Table 1). The overwhelming significance of this factor is consistent for students across all categories of ethnicity, admit status, and transfer status (Table 6). This "personal interest" translates into a number of educational and developmental issues. For instance, a comment by a UC Davis student who took 6 years to graduate reflected "personal" reasons, but also a change in major and career goals:

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[14] Personal communication with numerous student services professionals.

> Having been in school so long has helped me develop into a very well-rounded person. I was a science major for 3 1/2 years before switching to liberal arts. My science background gave me a different perspective in my liberal arts classes. I do not regret having spent this much time in school.

Students were surveyed about other factors that affected their ability to benefit from their curricular experiences, including time off to work, athletic activity, and travel. While relatively less significant than taking extra courses, they nevertheless point to the importance students attach to the process of defining personally meaningful life goals while in college (Table 1). Societal values and expectations encourage students to experience their collegiate years as a unique opportunity to explore and experiment without fear of financial or personal penalties. In addition, the collegiate years are a prime educational period. College students are in a stage of personality development and maturation that permits expansion of the intellect and of the personality in ways that are not possible during the secondary school years. It is likely that never again in their lifetimes will students be so free and open to new experiences. As one student explained,

> I wanted to get a full and well-rounded education. I wanted to take advantage of other things the University had to offer besides academics, such as the cultural events, political forums, and learning outside the classroom.

While many of those who take more than four years do so for reasons that are to a large degree beyond their control -- e.g., financial need, family matters, or ill health -- some students voluntarily choose to spend additional time in order to promote educational experiences in a variety of extra-curricular venues. The Davis and Riverside surveys reveal a deep student concern to learn outside, as well as inside, the classroom. This viewpoint is aptly summarized by a UC Davis student:

> Four years is not a realistic time to finish. You really need the extra year because college is so much more than a scholastic education.

The following elements, beyond scholastics, were identified by these students:

> Work: Experience in the world of work often serves as a motivating force for students to discover more personally relevant reasons for pursuing their studies. Approximately 1 in 4 students indicated that they took more than four years to graduate in order to explore the occupational world [rather than for financial reasons -- see above and Table

TABLE 6

EXTRA-CURRICULAR EDUCATION FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ETHNICITY

Ethnicity	Type of Factor* Take Extra Courses Out of Interest	Time Off To Work	Athletic Activity	Travel
Underrepresented Minority	69%	17%	20%	20%
White	64%	16%	16%	14%
Asian	77%	27%	15%	12%

EXTRA-CURRICULAR EDUCATION FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ADMIT STATUS

Admit Status	Type of Factor* Take Extra Courses Out of Interest	Time Off To Work	Athletic Activity	Travel
Regular	67%	25%	17%	15%
Special	52%	14%	7%	7%

EXTRA-CURRICULAR EDUCATION FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY TRANSFER STATUS

Transfer	Type of Factor* Take Extra Courses Out of Interest	Time Off To Work	Athletic Activity	Travel
Transfer	44%	47%	2%	15%
Non-Transfer	68%	21%	18%	15%

*Percentages refer to the proportion of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

1]. The written responses to open-ended questions indicates that, in order to make rational career decisions, students seek an experiential base from which to make informed decisions about their own vocational interests, abilities, preferences, and needs. Some need basic career information and orientation. Others want greater exposure to, and an understanding of, the world of work and their future career.

Athletic Activity: Slightly more than 16 percent of the respondents indicated that athletic activity influenced their degree progress (Table 1). Athletics is usually seen as merely a diversion or leisure-time activity. However, the written comments of students are corroborated by studies that see athletic participation as constituting a significant arena for self-development and self-actualization.[15]

For example:

> Fencing became an important part of my life. It helped me to become motivated and disciplined in my studies, working, and living, in general. Setting goals for myself and achieving them helped me learn about my own potential as a human being.

Travel: Beyond the expanding experiences provided by the worlds of work and play, roughly 15 percent of the students surveyed indicated that they took time off from their studies to travel (Table 1). Students travel not merely as a change of pace, or for a vacation. Instead, they perceive travel as an essential complement to coursework and, beyond this, as an opportunity to acquire new experiences, opportunities, and challenges that have not readily been provided by their home or school experience. A foreign language major, for instance, will find travel in Europe critical to the development of his or her linguistic skills. Exposure to different cultures and history are also seen as important by students. For example,

> I needed a break from academia because at the time I felt academics had very little 'real world application'. I felt I was learning, but in a void. Also, I was tired of being in a homogeneous population, i.e., all young, educated, single,

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[15] These researchers have suggested that involvement in sport is capable of providing the individual with an identity, a sense of personal worth, and a strengthened sense of accomplishment and achievement. See Loy & Ingham 1981; Wells & Picou 1980; Rehberg & Schafer 1968.

> mostly white and upper middle class. I wanted some diversity, some life, and for this reason I took a year off to travel through Europe and the Middle East.

Family and Health Factors

Problems arising from stress, family/marital relationships, and health are endemic to all groups and occupations; students are no exception. Given the highly competitive nature of undergraduate study, it is not surprising to find stress mentioned by slightly more than 4 out of 10 students as a precipitating factor that influenced their progress toward the bachelor's degree (Table 1). When asked to comment on the need to take more than four years, a student exclaimed, "Just to keep my sanity!!!"

It is not uncommon to hear students speak of the mounting pressures experienced while in college. Emphasizing their need to temporarily disengage from a stressful environment, students frequently responded to open-ended questions with the word "burn-out" or commented on the deleterious consequences for their physical and mental health of academic-related stress. For example,

> Nobody can study seven nights a week until 2 a.m. without burning out. And you have to do this in order to succeed in your courses; everybody's doing it. Unfortunately, this body couldn't take it. If I didn't slow down my pace I would have landed in the hospital or the nut-house.

The amount of stress students perceived varies widely by various ethnic groups: as Table 7 indicates nearly twice as many Asians cite stress as a precipitating factor than do underrepresented minorities. While approximately 1 in 4 students indicated that family/marital issues served as a precipitating factor, more than one-half of the transfer students do so. This finding is consistent with the fact that a significantly higher proportion of transfer students have established their own families and, as a result, are more likely to feel the press of competing demands from family and academic work (Table 7). The comments of a transfer student are indicative of this type of pressure:

> My last 2 years at UC Riverside were very difficult because I was married and had to work nearly full-time and go to school part-time. This was very stressful and prevented me from seeking good counsel and from participating in study groups. During my last two years I commuted 60 miles, one way, 4 days per week. Freeway driving takes a lot out of a person. As a consequence, my study time suffered.

TABLE 7

FAMILY AND HEALTH FACTORS INFLUENCING TIME TO DEGREE COMPLETION BY ETHNICITY

	Type of Factor*		
Ethnicity	Stress	Family/Marital Issues	Personal Health Problems
Underrepresented Minority	23%	34%	14%
White	39%	24%	20%
Asian	41%	19%	13%

FAMILY AND HEALTH ISSUES INFLUENCING TIME TO DEGREE COMPLETION BY ADMIT STATUS

	Type of Factor*		
Admit Status	Stress	Family/Marital Issues	Personal Health Problems
Regular	39%	24%	18%
Special	24%	38%	28%

FAMILY AND HEALTH ISSUES INFLUENCING TIME TO DEGREE COMPLETION BY TRANSFER STATUS

	Type of Factor*		
Transfer Status	Stress	Family/Marital Issues	Personal Health Problems
Transfer	47%	51%	30%
Non-Transfer	37%	22%	17%

*Percentages refer to the proportion of respondents assigning a code of 1=slight influence; 2=important; or 3=very important to a given precipitating factor.

UCLA: Comparisons With Students Graduating Within Four Years[16]

The UC Los Angeles survey provides data on students who completed their undergraduate studies within four years and students who required more than four years to complete their degree. These data permit us to make comparative observations about thesimilarities and differences between these two categories of students, and hence to infer the extent to which various factors may be seen as contributing to a delay in graduation.

> Institutional Factors: The data indicate that with regard to institutional factors, there is relatively little difference between students graduating in four years and those taking additional time (Table 8). These findings suggest that the difficulty of obtaining courses is of relatively minor significance insofar as it affects student progress toward the degree.
>
> Academic Factors: The primary factors that differentiate students who graduate within four years from those who take longer to graduate are those involving academic factors (Table 9). Students who graduated within four years were approximately twice as likely to have completed University coursework (earned advanced placement units) while still in high school and, consequently, also expressed a significantly greater sense of academic preparedness for university coursework than students who took more than four years. Other academic factors associated with taking more than four years to graduate were: earning a double major; changing majors; and the expectation of taking longer than four years to complete the degree. Moreover, students who required additional time had poorer academic records -- as indicated by the finding that they were nearly three times as likely to have repeated a course; were more than twice as likely to have failed a course; and had lower grade point averages. Thus, it is clear that those who graduated in four years benefitted from greater academic preparation and less complicated educational goals.

NATIONAL COMPARISONS

A basic assumption relating to views of the college-going population is that the traditional or "normal" pattern for earning a bachelor's degree consists of entering college

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[16] This section addresses particularly supplemental language questions relating to availability of courses (both major and general education), and remedial coursework.

TABLE 8

COMPARISON OF UCLA STUDENTS GRADUATING WITHIN FOUR YEARS AND THOSE TAKING MORE THAN FOUR YEARS: INSTITUTIONAL FACTORS

Factors Experienced	Students Graduating Within 4 Years	Students Graduating In More than 4 Years
General education class closed	52%	62%
General education class time changed after student enrolled	3%	10%
General education class cancelled	10%	15%
Required class for major closed	36%	39%
Required class for major time changed after student enrolled	0%	7%
Required class for major cancelled	19%	9%

TABLE 9

COMPARISON OF UCLA STUDENTS GRADUATING WITHIN FOUR YEARS AND THOSE TAKING MORE THAN FOUR YEARS: ACADEMIC FACTORS

Factors Experienced	Students Graduating Within 4 Years	Students Graduating In More than 4 Years
Earned advanced placement credit in high school	67%	36%
Feel very or somewhat underprepared academically for University coursework	26%	51%
Repeated a course	26%	68%
Failed a course	7%	15%
Expected to take longer than 4 years to complete degree	21%	40%
Changed majors at least once	32%	45%
Have a double major	7%	18%
University grade point average (Mean)	3.26	2.93

immediately after high school graduation and subsequently completing these studies within four years. This assumption is inaccurate. Data from the US Department of Education's National Longitudinal Survey of High School Seniors indicated that 51 percent of the bachelor's degree recipients took more than four years from high school graduation to complete their degree. Of those who took more than four years, approximately three-fourths earned their bachelor's degree within five years after high school graduation and one-fourth took six or more years (Center for Education Statistics 1986).

This is the only way this information is collected nationally. University of California information is not collected in a form that is directly comparable. What we do know about University of California students is that the average five-year graduation rate for freshmen in the University is 56 percent. This rate includes all domestic freshmen regardless of ethnicity or admit status, and only measures graduation from the campus of initial enrollment.[17] Given that transfer rates range from 10 percent to 30 percent among the campuses it is not unreasonable to estimate that approximately three-fourths of the freshmen who enter the University graduate from one or another University campus after five years.

Moreover, a report by the California Postsecondary Education Commission noted that the University of California performs comparatively well in graduating 60 out of 100 regularly admitted students in five years. The report further estimated that another 10 will graduate from the University at a later date, and that an additional 10 students go on to graduate from some other college or university (CPEC 1985: 18).

In measuring elapsed time, University graduation rates are reported for a five-year time period because campuses routinely collect five-year data. Given the normal progress of the majority of students, five-year rates are more realistic measures of completion; this standard is not new, but has been evolving since the late 1970s (Astin 1987; Kissler 1980, 1986).

To put these UC figures in national perspective, however, we must compare four-year rates. Table 10 provides comparative four-year graduation data for selected major public universities, including the three UC campuses surveyed. The UC campuses are marked with a box to show their relative standings. Although direct comparisons between different institutions of higher education are problematic, University of California four-year graduation rates

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[17] In the past, it has not been possible to track students transferring from one UC campus to another. The University is developing a longitudinal data base which will provide better data in the future.

TABLE 10

COMPARATIVE FOUR-YEAR GRADUATION RATES OF FRESHMEN CLASSES ENTERING IN RECENT FALL TERMS AT MAJOR PUBLIC UNIVERSITIES

Institution/Year Entered Registration Fees		% Graduating	1986-87 Resident Undergraduate Tuition and Registration Fees
Virginia	1980	74.0	$2,366
	1981	74.0	
	1982	76.0	
North Carolina	1978	58.0	820
	1982	54.9	
Michigan	1981	55.7	2,662
	1982	57.4	
Pennsylvania State	1978*	50.0	2,996
Illinois	1978	47.0	2,083
	1979	48.0	
	1981	49.7	
UC Davis	1981	31.6	1,287
UC Los Angeles	1981	25.4	1,296
UC Riverside	1981	34.1	1,311
Texas-Austin	1978	36.0	862
	1980	26.3	
	1981	31.0	
Iowa State	1975	32.0	1,390
	1980	29.3	
Ohio State	1978*	31.7	1,704
Iowa	1978	31.0	1,388
	1979	29.4	
	1981	25.7	
Missouri	1979	30.0	1,567
	1980	30.0	
	1981	29.0	
Kansas	1979	29.1	1,290
	1980	26.3	
	1981	25.3	
	1982	25.4	
Colorado	1975*	24.0	1,466
Maryland	1981	21.4	1,602
	1982	23.0	
Washington	1978*	22.0	1,605
Minnesota	1977*	16.9	1.970

*These are the most recent dates available. National trends suggest that these four-year trends have probably declined.

rank above the median of other major public universities. Tuition and registration fee data provided in Table 10 suggests that there is no real relationship between high four-year graduation rates and the cost of an education.[18] It should also be noted, however, that the available trend data suggests a steady decline in four-year graduation rates nationwide.

Returning the focus to the UC system, additional conclusions may be suggested. Although comparative historical data on graduation rates are not available for the eight general campuses of the University of California, the information that is available suggests that: (1) five-year graduation rates have slightly increased since the late 1940s; and (2) students of the 1980s are taking longer to graduate than their counterparts of the 1960s and 1970s (Kissler 1980). For example, the four-year graduation rates at UC Berkeley declined from 44 percent to 36 percent between 1966 and 1973 (Frank 1980). Similarly, the number of UC Los Angeles students graduating with twelve or fewer quarters attempted declined from 52.1 percent to 40.4 percent between 1980 and 1986. Since this includes all elapsed time, however, the significant point may be not be the rate itself, but the reasons for the elapsed time. For this we must analyze the findings of our surveys.

ANALYSIS OF FINDINGS: DIFFERING PERSPECTIVES ON DEGREE-COMPLETION TIME

Approximately 70 percent of the freshmen students admitted to the University of California in Fall 1981 took more than four years to graduate.[19] This fact has prompted legislative concern. Does this figure represent student lingering, resulting in a delay in the "normal" progression of students through the University, or a new norm? If it is a delay, is it wasteful and counter-productive? Do these factors indicate administrative areas in which the University should improve? Do the surveys pinpoint Statewide policy issues of significance? In the preceding sections we discussed the factors identified by students as affecting their pace toward completion of baccalaureate degree requirements at the University of California; we turn now to an analysis of these factors, drawing, as well, on the scholarly literature relating to this subject.

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[18] For example; North Carolina has the second highest four-year graduation rate and the lowest student cost; conversely, Minnesota has the fifth highest tuition and the lowest four-year graduation rate.

[19] Consistent with data reporting procedures of other postsecondary educational institutions, University four-year graduation rates are determined by calculating the percentage of students from a given entering freshman class who receive a baccalaureate degree four calendar years later. Thus, a 30 percent graduation rate is based on all students who enter a given year--including those students who drop-out, stop-out (i.e., temporarily discontinue their studies), or transfer to another postsecondary institution.

Discussions of the reasons and causes for taking more than four years to graduate are generally characterized by very different kinds of emphases. While some researchers insist that extending one's time in college for more than four years constitutes a significant broadening of personal horizons and ought to be encouraged, others have pointed to the waste of economic and institutional resources caused by students who take "extra" time to graduate. As both our surveys and the literature suggest, however, the factors influencing a student to take more than four years to graduate result from an extremely complex set of conditions and influences.

The studies by educational experts cited in this report have recognized that the meaning a student attributes to his or her behavior may differ substantially from that drawn by an observer for the same behavior. For example, while the dean of a college may define a student's interruption of the four-year progression of studies as an institutional failure -- a failure to help the individual achieve what he or she initially set out to do -- students may view the additional time as a positive step toward completion of their life goals and as an act of personal fulfillment. Students may decide to modify the established four-year progression (some call it "lockstep") of University studies in order to, inter alia, temporarily pursue formal studies in different environments; seek additional life experiences through travel, volunteer service, or other self-directed activities; obtain employment to meet unexpected or additional financial burdens; broaden their academic and intellectual horizons through a double major or taking additional courses out of interest; take reduced course loads to ensure optimal performance in coursework; cope with family or medical crises. There may also be institutional factors that result in increased time whether or not the student so chooses.

The Argument Against "Delay"

In many quarters, taking more than four years to complete a baccalaureate degree is commonly regarded as a social loss, a waste of institutional resources, a personal failure, or frivolous dawdling. Recently United States Secretary of Education William Bennett added the complaint that students are not finishing college "on time" because their studies are not compelling (Wilson 1987). This negative perception derives, in part, from the assumption that the purpose of a college education

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is the earning of a degree in the "approved" time of four years, immediately following high school graduation.

Institutional Barriers: To the extent that this negative analysis is sound, it would relate to both institutional barriers to student progress, and the extra costs incurred by the State in satisfying the needs of individual students. That is, if students cannot get the courses they need at the appropriate time, or do not receive adequate guidance to do so, the educational enterprise is inefficient. In the Conclusion section we consider measures the University, with State support, could institute to counter these negative implications of an extended time to degree.

Financial Barriers: The survey findings suggest that many students (approximately 60 percent) felt that they required additional time to complete the degree because of financial hardships requiring them to seek employment. This situation is not limited to California: there has been a steady six-year decline in federal spending for higher education. An American Council on Education survey of entering college freshmen in 1986 found that the number of freshmen receiving Pell Grants fell from 31.5 percent in 1980 to 19.9 percent in 1984. According to the report, "the data on federal grants and loans point to dramatic shifts in the way American college students and their families have had to cope with changing federal aid policies over the past six years" (ACE 1986:2). Fortunately, to date UC students have not suffered unduly in this shift in aid emphasis from grants to loans. But there has also been a steady nationwide decline in the relative value of the financial aid package for all students; in 1986 the average amount of federal aid available for students had decreased in value by 10 percent since 1980. University of California students have shared this fate with their counterparts across the nation. Between 1981-82 and 1985-86, the total amount of financial aid received by students at the University decreased by 14 percent. Students surveyed indicated that they have had to seek part-time or full-time employment while attending the University and, as a result, to reduce the pace at which they move toward completion of degree requirements.[20] Without question, student perceptions of financial barriers loom very large when discussing delayed progress to graduation.

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[20] According to a survey of American college freshmen conducted by the Bureau of Labor Statistics of the US Department of Labor, a record 48 percent of the college freshmen who had entered college after graduating from high school in June 1986 were in the labor force in October 1986 (Bureau of Labor Statistics 1987). This proportion of college freshmen in the labor force is the highest recorded since the Bureau of Labor Statistics began collecting such data in 1959.

State Costs: Beyond considering ineffective University procedures, we should also determine to what extent students have incurred extra costs for the State by taking additional courses. The State funds instruction for undergraduate enrollment in the University on the basis of a fixed dollar amount per full-time-equivalent (FTE) student, and not on the basis of headcount enrollment. The fixed dollar amount is referred to as the "marginal cost of instruction," and consists of a calculated per student cost of the components of the instructional budget, faculty and teaching assistant salaries, benefits, and other instructional support. The University's FTE enrollment is calculated on the basis of credits attempted for the year (three quarters), divided by 45.

If a student takes fewer than 15 units in one or more quarters of the year, then the student will count as less than a full FTE, and the University will receive less than the full marginal cost of instruction for that student. Thus, a student working part-time who takes a reduced courseload each quarter and, as a result, takes five years instead of four to accumulate the necessary credits for graduation does not "cost" the State extra in terms of instructional support. The same total support is spread over five years instead of four.

If students take full credit loads each quarter, and are still taking more than four years to graduate -- thus graduating with more than the minimum 180 quarter credits stipulated as necessary to graduate -- the result is additional cost to the State. The amount extra would be the excess credits divided by 45, multiplied by the marginal cost of instruction.

However, it is important to note that University policy specifies the minimum number of quarter or semester units that must be completed by a student in order to earn a baccalaureate degree; in most cases, a student must complete 180 quarter units (120 semester units). University policy also requires a student to maintain minimum progress toward the degree; the normal program for undergraduate student is three to four courses (12 to 16 quarter units) per term. A student is subject to disqualification for failing to meet minimum progress requirements. At this pace, it should be noted, a student thus may take 15 quarters (five years) to complete the minimum number of units required to earn a degree. As suggested above, however, such a delay would not create extra instructional costs for the State.

All of the campuses of the University have a limit on the maximum number of units that a student may accumulate. Except in special cases, a student may not register for classes once he or she has completed a maximum number of units without special approval.[21] The maximum number of units allowed varies between the campuses, colleges, and majors. For example, at UC Los Angeles, a maximum of 208 units is allowed in the College of Fine Arts and the School of Nursing; in the College of Letters and Science, a maximum of 216 units (228 for double majors and special programs) is allowed; in the School of Engineering and Applied Science, a maximum of 213 units is allowed.

The University monitors the units accumulated by all undergraduate students through computer-generated checks. Each student nearing the maximum number of units allowed is required to see a dean in his or her college or school in order to ensure completion of degree requirements within the number of allowable units.

As indicated by the data discussed above (see page 9), most students graduate with only ten units above the minimum. Moreover, there is very little difference between the number of units completed by students graduating within four years and those taking more than four years. This, plus the small number of students who exceed the maximums stipulated, suggests that the students who take more than four years to graduate have a comparatively small budgetary impact upon the University.[22]

The Argument Emphasizing Educational Gains: Many educational specialists espouse certain broad goals for the educational process that, for certain students, are met best by departing from a "lock-step" approach to higher education. Not coincidentally, as the quotations cited above make clear, the "personal" reasons cited by students frequently invoke the broad goals articulated by these experts. Moreover, while stereotypes about undergraduate students' pace toward graduation abound, studies exploring the motivational forces influencing progress toward degree completion have had less attention. Even these surveys, however, suggest that such factors express a complex variety of interests, needs, and desires. These are analyzed briefly in the pages that follow.

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[21] For example, UC Berkeley's College of Letters and Science reports that out of more than 17,000 students, approximately 8-12 students per semester are allowed to exceed the maximum number of units. Students are allowed to pursue double majors and change majors as long as they will graduate within the maximum allowable number of units. Receipt of financial aid is contingent upon the approval of study lists by a student's college or school.

[22] The number of students present on a campus may have an impact as well on student service programs (such as counseling, tutorial, career guidance, placement, and health services). That is, the demand for these services may be greater if students do not graduate within four years. However, since these programs are funded on the basis of student fees (with the possible exception of financial aid), the presence of a given student on campus for more than four years would not incur additional financial burdens for the State.

The issue of pace or progress toward graduation can be examined in several ways; more important than the pace itself is the reason behind it. A slower pace may be positive if it reflects sound educational goals. It may be negative, if it is due to student dawdling, ineffective University programs, an unsuitable curriculum, or institutional hindrances. It cannot be assumed, therefore, that a slower pace means empty or wasted time.[23] The notion of an uninterrupted four-year college experience has always received powerful cultural support in American society (Freedman 1967). Most students enter college with the baccalaureate degree as a minimum objective, and perceive four years as the normal period in which to complete degree requirements.[24] Some researchers, however, have questioned whether the "four-year lockstep" continues to be the standard educational "objective" of students after they have experienced a semester or two in college (Haagen 1977; Tinto 1987). The data obtained in our studies indicate that a student's educational objectives shift and change as they navigate a course leading to the baccalaureate degree. For instance, a re-entry student found that her original academic and career objectives had changed shortly after enrolling:

> When I returned to school from being out so long, I had different ideas of what I wanted as a major and I had to change classes from my original intent. Because I am older, I've changed my mind about what I wanted.

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[23] For example, a pre-law student will work as a paralegal in a law firm, a foreign language student may spend a year in Italy, or a social work student may spend a year on an Indian reservation in New Mexico.

[24] National twenty-year trend data (1966-1985) for entering freshmen indicate that only between 4.8 percent and 6.3 percent of entering freshmen anticipate needing extra time to complete a baccalaureate degree; see Astin (1987b).

There is no simple monolithic explanation for why students take more than the traditional quartet of years to graduate. A large number of socio-cultural, psychological, and economic factors interrelate in ways that make it difficult to precisely determine the causal variables that influence a particular student's pace toward graduation. However, based upon our studies of the Davis, Los Angeles, and Riverside campuses of the University, the following observations illuminate the major precipitating factors that shape degree progress among undergraduate students, and that may be seen as economically essential or educationally beneficial.

Pursuing Curricular Breadth: As noted above, the most significant finding of the Davis and Riverside studies was that students' degree progress was influenced by the desire to take additional courses out of "personal interest." These data suggest that many students embrace the educational goal of breadth of knowledge--exploring areas not available within the curriculum of their major course of study. Students, of course, do not create from whole cloth such goals of intellectual breadth or personal growth. Much support for these goals is found in societal values and expectations, and in the literature on higher education (Boyer 1987; Eckland 1963).

Clarifying Educational and Career Goals: Students who initially lack goal clarity upon entrance to the University may take more time. Although societal expectations, familial pressures, and occupational exigencies may get students to college, these external forces do not always provide them with clearly defined educational and occupational goals. Instead, students may search for ways to resolve their goal ambiguity or discover more personally relevant reasons for pursuing their studies (Ostar 1987); although this may add time to their degree progress it would be educationally beneficial. Temporary ambiguity about future goals is intrinsic to the maturation process.[25] This situation was expressed in the following comments of a public administration student who took 5 1/2 years to graduate:

> I came to the University basically directionless. I felt very unsure of what I liked, wanted to study, career goals, etc., for at least the first 3 years. I was an exploratory student. However, things finally came together for me and I will soon begin an

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[25] Not all students enter the University with clearly defined goals. And even when clearly defined, goals will frequently change during the course of the undergraduate years.

administrative position with a nearby municipality.

It is worth remembering that most adults change career goals and careers several times during their working lives (Tinto 1987).

"Stopping Out": Student perceptions of the value of temporarily interrupting their postsecondary studies is supported by educational experts. A survey of 100 colleges and universities turned up only one dean who did not feel that temporary time out from college increased students' motivation and raised grades (Kesselman 1976). A study by Haagen (1977) at Connecticut Wesleyan University has demonstrated that most students who took brief interludes from their studies did so because of unfulfilled personal needs -- i.e., to gain direction, sense of purpose, self-awareness, and motivation. Taking time out proved to be a valuable strategy for students who, upon their return to college, became highly motivated and successful students (Heath 1968).

Stopping out can lead to both personal and academic growth (Cope & Hannah 1975). Comments made by students surveyed at the three University campuses corroborate Cope and Hannah's findings that students' personal and academic reasons for temporarily withdrawing from college interact in valuable ways. Assisting a student to become intellectually capable and mature may require the use of strategies and venues outside the University; these, in turn, will achieve maximum benefits from a University experience (*Cf*., Tinto 1985, 1986, 1987). Indeed, research suggests that whatever the extracurricular activities may be, the experience carries over into their academic career. The educational value of temporary leaves has been recognized by John R. Coleman, former president of Haverford College, who implemented an administrative policy advocating temporary stopouts for almost all undergraduates (Coleman 1974). Similarly, MIT encourages students to consider stopping out if they are uncertain about their academic or career goals.

Travel as Learning: Taking time off to travel was cited by 15 percent of the students surveyed as a factor contributing to the need for additional time to complete degree requirements. The pursuit of the intellectually broadening and culturally enriching experiences provided by travel has been supported by a variety of expert recommendations (Haagen 1977; Higgerson 1985; Ochberg 1986). Indeed, the educational value of exposure to other peoples and cultures is commonly recognized as one of the most inspirational goals of undergraduate education, particularly in creating an informed citizenry in a pluralistic society. Especially important are those travel experiences that speak directly to career choice--as in the case cited earlier of the foreign language student spending a year in Italy. But even travel that apparently is unrelated to any career choice pays educational dividends. Researchers have found that such leave-taking can bring about a renewed sense of purpose, direction and autonomy in students upon resumption of their studies (Ochberg 1986).

Reducing the Stress: A significant factor contributing to the need for more than four years to complete the baccalaureate was problems arising from stress. In order to preserve their health, some students feel a need to distance themselves from the press of their University experience. Even beyond mental disequilibrium, student perceptions of negative health effects of stress are supported by scientific research--for example, recent work in the field of psychoneuroimmunology, which has documented the effect of psychological factors on the functioning of the immune system (Coughlin 1987). Stress has been shown to affect the body's immune defenses in ways that can, in turn, leave an individual vulnerable to infectious illness. A slower pace toward graduation can thus provide some students with a more temperate--and healthy--rhythm in their day-to-day lives.

Coping with New Intellectual and Social Experiences: Representing a milieu unconstrained by the traditional roles and norms of American high school culture, the University of California offers students a cosmopolitan array of experiences, cultures, and activities. As a result of such diversity, students enlarge the possible range of life and career choices available to them. At the same time, this diversity places some students into largely unfamiliar situations, forcing them to negotiate their way through unknown waters. This negotiation has the long-run effect of increasing adaptive maturity; but in the short run, it has the potential to create a sense of frustration for some students as they attempt to sort out and integrate the often dizzying diversity of intellectual, personal, and social experiences encountered at the University (Reisman 1980).[26] It is not surprising, therefore, that in coping with these challenges some students will deviate from the conventional four-year pace toward completion of their degree requirement.

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[26] These developmental experiences will inevitably lead some students to explore, and in some cases grope, for coherence not only in their academic program, but also in their life and occupational goals.

CONCLUSION

The interview data collected for this report has discussed at some length the reasons students gave for taking more than four years to graduate. We might turn that information on its head, for the moment -- using it to provide, by implication, a profile of the student who can successfully complete the undergraduate curriculum in four years. This student has several significant characteristics. He or she:

- had completed university courses before ever coming to the University
- felt well prepared academically for University coursework
- had not changed majors
- had not attempted a program with a double major
- had not repeated a course
- had not failed a course
- had taken not only the minimum number of units stipulated as a full-load, but an additional 3-4 units above that, each term
- had not encountered financial difficulty and/or had to stop learning to earn
- had not experienced problems with their personal health or marital/familial relationships
- had concentrated only on the courses needed to graduate, seldom exploring subject areas outside those stipulated as a minimum program

Fewer and fewer students seem to fit that profile. The findings of this study point, in general, then, to the inaccuracy of the assumption that students who take more than four years to graduate are somehow errant, unsuccessful, or out of compliance with societal norms. As we have seen, students are motivated for a variety of reasons to extend their undergraduate education beyond four years; the University's response, therefore, must also vary.

To the extent that such "delays" reflect institutional barriers, the University must make serious efforts to investigate and remedy the causes: this survey suggests this should include monitoring relevant statistical indicators, interviewing students, and providing the necessary student advising services and other academic support structures. Perhaps most important, the State should address financial aid needs of students whose educational careers have been delayed for financial reasons. These are discussed in more detail, below.

The surveys conducted for this study show, however, that most of the "delays" serve educationally beneficial ends. Accordingly, to the extent that the longer educational process does not represent significant costs, the University and the State should be accommodating and supportive of such student decisions. What reasons, then, remain to be addressed by the University and the State that may be seen as educationally negative delays? We should note that the problems identified by students as roadblocks to the timely completion of degree requirements include: inadequate advising services (number 5 on Table 1); and (2) insufficient financial aid (numbers 2 and 9). The role played by the University and the State will vary in addressing each of these problems.

> (1) Inadequate advising services: In order to respond appropriately to this problem, the University will need to evaluate carefully both student perceptions of advising, and the variety, quality and frequency of the advising mechanisms currently in place. There are no absolute measures that could be used to gauge what would be "enough" advising to address this student concern, but the campuses could certainly monitor closely the current mechanisms to discover what students are trying to tell us by this complaint.
>
> Through consultation with the campuses, then, the University can address this problem. As an integral component of the intellectual and academic life of the University, campus advising services need to be assessed in terms of their ability to provide a comprehensive range of support to an increasingly diverse student population. Moreover, it may be that, to be effective, advising programs need to be systematically linked to other student services and programs on campus. In addition to monitoring its own programs, the University could gauge effective programs at other institutions, to see if approaches used elsewhere could improve the time to degree completion rate for University of California students.
>
> (2) Insufficient Financial Aid: The most important delay identified by students, leading to harmful consequences in student progress toward degrees, is that of financial pressures. Drawing from the comments of students, we may isolate two different kinds of financial needs that, students perceive, are not now met adequately. First, students indicated that they do not have access to flexible, short-term financial assistance. Respondents, particularly low income and mature students, often seemed to be saying that their resources had to be so closely committed that

certain kinds of set-backs -- e.g. the loss of a job, illness of a child, mechanical problems with an automobile -- could have such a devastating impact that they would need to drop out of school or reduce their course load to cope. (This is not to say that short-term emergency loans are not available -- they are. Apparently, however, such students do not see additional loans as a viable solution to their problems.)

Second, students indicated that they do not have access to sufficient financial aid. As a result, many students said that they were forced to slow down their degree progress in order to seek partial or full-time employment. To the extent that such employment does not contribute toward educational goals, it must be seen as a negative element, to be addressed primarily by the State (particularly as the federal government reduces its role in this area). Indeed, as the Master Plan Commission's report indicates, the State's actions relating to financial aid issues must prove central to the future of higher education in the next two decades. The survey results reported here suggest that financial aid is not only an access issue, but also a progress-to-degree issue. The results may also point the most appropriate way for State action: a strategy that not only increases amounts of financial aid available to California students, but one that provides a mechanism with greater flexibility for meeting short-term crises.

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APPENDICES

APPENDIX 1

UNIVERSITY OF CALIFORNIA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

DAVID PIERPONT GARDNER
President

WILLIAM R. FRAZER
Senior Vice President —
Academic Affairs

OFFICE OF THE PRESIDENT
BERKELEY, CALIFORNIA 94720

May 15, 1987

Dear Graduating Senior:

Enclosed you will find a very brief questionnaire targeted to those students who found it necessary to spend more than four years completing their undergraduate degree. We are interested in both your personal reasons and any University policy that may have delayed you. In a continuing effort to make the University experience responsive to student needs, I seek your opinions on this question.

Please be assured that your name will be eliminated from the form before the analysis; the results of this survey will be strictly confidential. We want you to give us honest and frank answers; telling us what you think we want to hear won't help us to do a better job.

Please take five minutes to fill this out and return it in the enclosed business reply envelope. It will be a big help to us in planning our curriculum and support services and will therefore benefit future students at the University of California.

If you have any questions, please feel free to call Cathie Witty [415-642-0389] or John Sewart [415-643-6315] of my staff. Best of luck to you in your chosen activity after graduation.

Sincerely,

WRFrazer

William R. Frazer

Enclosures

cc: Assistant Vice President Cox
Director Justus

STUDENT OPINION: FACTORS RELATED TO TIME TO DEGREE

1. Name ____________________
2. Sex ____ 3. Ethnicity: ____Black ____White __Asian
   ___Hispanic Other: _____

4. Admit Status: Regular ______ Special Action ______

5. Major: ____________ 6. Total Number of years it took to earn the B.A. ________

7. Did you ever take a semester or longer off? How long? _______
   Why?

8. Did you transfer from another institution?
   How many times? ________ From where? ____________

9. Did transferring slow down your progress toward the degree?
   How?

10. What factors contributed to taking longer than four years to graduate. Rank each of the following possibilities 0 - 3 using the following scale: 3= very important; 2=important; 1=slight influence; 0=Not a factor

[ ] Repeating courses
[ ] Remedial coursework
[ ] Trouble getting G.E. requirements when I needed them
[ ] Changed my major
How often? ______
[ ] Internship program
[ ] Family/marital issues
[ ] Lack of child care
[ ] Trouble getting major requirements when I needed them
[ ] Ran out of money

[ ] Needed to work
How many hours per week? _____
[ ] Double major
[ ] Athletic activity
[ ] Reduced courseload
Why? ________
[ ] Time off to work
[ ] Time off to travel
[ ] Health problems
[ ] Took extra courses out of interest
[ ] Needed better advising
[ ] Needed a break

11. Other reasons, comments or examples:
____
____

(Use back of the page if necessary)

[redacted]

APPENDIX 2

ID NUMBER________________________

SAMPLE ID NUMBER__________________

SAMPLE NUMBER (CIRCLE) 1 2 3

Survey A: Time to Degree For Students Who Started at UCLA as Freshmen

Hello, I'm _______ from the Institute for Social Science Research at UCLA. We are calling because the University of California is conducting a survey to learn about what factors slow down or speed up degree completion for undergraduate students. This is a chance for you to tell the UC administration about the factors that have helped you or hindered you in getting your degree. All of your answers today will be held in the strictest confidence, and your name will not appear on my answer sheet.

1. In what quarter and year did you enter UCLA as a freshman?

___ (1) 1983	___(1) fall quarter
___ (2) 1982	___(2) winter quarter
___ (3) 1981	___(3) spring quarter
(4) Other (specify)___________	___(4) summer quarter

2. Do you expect to graduate from UCLA at the end of this spring quarter? ___Yes (GO TO 3) ___No (GO TO 2a)

2a. IF NO: When do you expect to graduate?

___(1) End of summer sessions, 1987

___(2) End of fall quarter, 1987

___(3) End of winter quarter, 1988

___(4) End of spring quarter, 1988

___(5) Other (specify)______________________________

I am now going to ask you about a variety of college experiences that could help or hinder your progress toward graduation.

3. Do you have a double major?

___(1)Yes ___(2)No ___(3)don't know/no answer

4. When you were in high school, did you ever pass an advanced placement test to earn college credit for high school classes?

___(1)Yes ___(2)No ___(3)don't know/no answer

5. Did you have an undeclared major when you entered UCLA?

___(1)Yes (GO TO 5a) ___(2)No (GO TO 6)

___(3)don't know/no answer (GO TO 6)

5a. IF YES: When did you declare a major?
(PROBE FOR QUARTER AND YEAR)

(quarter)_______________ (year)_____________

6. Have you ever changed majors other than from undeclared?

___(1)Yes (GO TO 6a-b) ___(2)No (GO TO 7)

___(3)don't know/no answer (GO TO 7)

6a. IF YES: How many times?_________ (GO TO 6B)

6b. Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

7. Did you participate in a supplemental program or a specialization in addition to your major?
(IF RESPONDENT ASKS WHAT IT IS, a supplemental program is not degree-granting but is a series of courses designed to enhance your work in certain areas. Examples include Business and Administration, Program in Computing, International Relations, Urban Studies, African Studies, and Women's Studies.)

___(1)Yes ___(2)No ___(3)don't know/no answer

8. Have you ever repeated a course at UCLA?

___(1)Yes ___(2)No ___(3)don't know/no answer

9. Have you ever been unable to take a class that fulfilled either breadth or general education requirements during the quarter you wanted it?

___(1)Yes (GO TO 9a) ___(2)No (GO TO 10)

___(3)don't know/no answer (GO TO 10)

9a. IF YES: I'm going to read a list of common reasons that students are unable to take classes that they need.
Please indicate which reasons have applied to you:
(CHECK ALL THAT APPLY)

___(1) Was the class closed when you tried to enroll?

___(2) Were you placed on a wait list but not enrolled in the class?

___(3) Did the class time conflict with your job hours?

___(4) Did the class meet at an inconvenient time?

___(5) Did you dislike or want to avoid the instructor?

___(6) Did you feel unprepared for the class?

___(7) Did you have to drop the class because its meeting time changed after you enrolled?

___(8) Were there prerequisites for the class that you had not completed?

___(9) Was the class canceled?

___(10) Any other reasons? (PLEASE SPECIFY)______________

10. Have you ever been unable to take a class that fulfilled requirements for your major during the quarter you wanted it?

___(1)Yes (GO TO 10a)   ___(2)No (GO TO 11)

___(3)don't know/no answer (GO TO 11)

10a. IF YES: I'm going to read a list of common reasons that students are unable to take classes that they need.
Please indicate which reasons have applied to you:
(CHECK ALL THAT APPLY)

___(1) Was the class closed when you tried to enroll?

___(2) Were you placed on a wait list but not enrolled in the class?

___(3) Did the class time conflict with your job hours?

___(4) Did the class meet at an inconvenient time?

___(5) Did you want to avoid the instructor?

___(6) Did you feel unprepared for the class?

___(7) Did you have to drop the class because its meeting time changed after you enrolled?

___(8) Were there prerequisites for the class that you had not completed?

___(9) Was the class canceled?

___(10) Any other reasons? (PLEASE SPECIFY)______________

11. Have you ever completed fewer than 12 units per quarter?

___(1)Yes (GO TO 11a - 11c)   ___(2)No (GO TO 12)

___(3)don't know/no answer (GO TO 12)

11a. IF YES: In how many quarters did you complete fewer than 12 units?____________________ (GO TO 11b)

11b. During the most recent quarter in which you completed fewer than 12 units, (CHECK ALL THAT APPLY)

___(1) did you register for less than 12 units?

___(2) did you drop some units after the quarter began?

___(3) did you enroll in courses that carried no units (e.g., English 1, Math A)?

___(4) did you get approval to take a reduced course load due to work or family responsibilities?

11c. I'm going to read a list of reasons why students commonly enroll in or complete fewer than 12 units in a quarter. Please indicate if these reasons apply to you.
Did you take a reduced course load because you :
(CHECK ALL THAT APPLY)

____(1) wanted to maintain or improve your grade point average?

____(2) needed to work more hours?

____(3) wanted to spend more time with your family?

____(4) needed some relief from the pressures of school?

____(5) wanted to spend more time in extra-curricular activities at UCLA?

____(6) were counselled to take a reduced course load by a counselor or academic advisor due to academic difficulty?

____(7) took 12 units but received a failing grade?

____(8) Other (specify)____________________

12. Have you ever completed more than 12 units in an academic quarter?

___(1)Yes (GO TO 12a)　　___(2)No (GO TO 13)

___(3)don't know/no answer (GO TO 13)

12a. IF YES: In how many quarters have you completed more than 12 units?

___(1) one quarter (GO TO 12b)

___(2) more than 1 quarter (SPECIFY)________ (GO TO 12c)

12b. IF ONE QUARTER ONLY: How many units did you complete that quarter?_________ (GO TO 12d)

12c. IF MORE THAN ONE QUARTER: During the most recent quarter in which you completed over 12 units, how many units did you earn?____________ (GO TO 12d)

12d. Now I'm going to read a list of reasons why students sometimes register for more than 12 units in a quarter. Please tell me which reasons apply to you. (CHECK ALL THAT APPLY)

___(1) Did you want to make up for quarters in which you took less than 12 units?

___(2) Did you register for extra units because a course you needed to take was only offered that quarter?

___(3) Did you want to take a course that was not required for graduation?

___(4) Did you want to accumulate extra units so you could take a reduced course load at a later time?

___(5) Did you register for all easy courses that quarter?

___(6) Were you advised to do so by a counselor or adviser?

___(7) Any other reasons? (SPECIFY)_____________________

13. Did you participate in the Freshman Summer Program at UCLA?

___(1)Yes (GO TO 13a)   ___(2)No (GO TO 13b)

___(3)don't know/no answer (GO TO 13b)

13a. IF YES to 13: Have you ever participated in any other summer sessions either at UCLA or another college or university?

___(1)Yes (GO TO 14)   ___(2)No (GO TO 14)

13b. IF NO to 13: Have you ever participated in other summer sessions either at UCLA or another college or university?

___(1)Yes (GO TO 14)   ___(2)No (GO TO 14)

14. Have you ever obtained academic counselling at UCLA?

___(1)Yes (GO TO 14a-b)   ___(2)No (GO TO 15)

___(3)don't know/no answer (GO TO 15)

14a. IF YES: From which department or departments? (ASK AS AN OPEN-END: DO NOT READ LIST. INTERVIEWER CHECK APPROPRIATE CODE BELOW. THEN GO TO 14b))

___(1) College of Letters and Science

___(2) An academic department

___(3) AAP

___(4) ASK Counselor

___(5) Other (specify)____________________________

14b. Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

15. Have you ever participated in the Academic Advancement Program at UCLA?

___(1)Yes (GO TO 15a)   ___(2)No (GO TO 16)

___(3)don't know/no answer (GO TO 16)

15a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

16. Not including summers, have you ever worked on campus in addition to attending school?

___(1)Yes (GO TO 16a)   ___(2)No (GO TO 17)

___(3)don't know/no answer (GO TO 17)

16a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

17. Not including summers, have you ever worked off campus in addition to attending school?

___(1)Yes (GO TO 17a)   ___(2)No (GO TO 18)

___(3)don't know/no answer (GO TO 18)

17a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

18. Have you been eligible for priority pre-enrollment at UCLA?

___(1)Yes ___(2)No ___(3)don't know/no answer

19. Not counting summers, have you ever lived in the residence halls at UCLA?

___(1)Yes (GO TO 19a) ___(2)No (GO TO 20)

___(3)don't know/no answer (GO TO 20)

19a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

20. Have you ever been sick or injured for more than one week during an academic quarter?

___(1)Yes (GO TO 20a) ___(2)No (GO TO 21)

___(3)don't know/no answer (GO TO 21)

20a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) not affected your progress toward graduation

___(3) (DON'T READ) don't know/no answer

21. Have you ever been an active member of a student organization, fraternity or sorority, or been involved in other extra-curricular activities at UCLA?

___(1)Yes (GO TO 21a)   ___(2)No (GO TO 22)

___(3)don't know/no answer (GO TO 22)

21a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

22. Have you ever participated on a varsity athletic team at UCLA?

___(1)Yes (GO TO 22a)   ___(2)No (GO TO 23)

___(3)don't know/no answer (GO TO 23)

22a. IF YES: Would you say this has:

___(1) slowed down your progress toward graduation

___(2) speeded up your progress toward graduation

___(3) not affected your progress toward graduation

___(4) (DON'T READ) don't know/no answer

23. Have you ever withdrawn from UCLA for one academic quarter or more?

___(1)Yes (GO TO 23a-b)   ___(2)No (GO TO 24)

___(3)don't know/no answer (GO TO 24)

23a. IF YES: For how many quarters? (GO TO 23b)

___1   ___2   ___3   ___Other (Specify)_______

23b. Why did you withdraw? (INTERVIEWER ABSTRACT STUDENT RESPONSE)

24. Have you ever taken a leave of absence from the University (i.e., did not register for one or more quarters?)

___(1)Yes (GO TO 24a-b)   ___(2)No (GO TO 25)

___(3)don't know/no answer (GO TO 25)

24a. IF YES: For how many quarters? (GO TO 24b)

___1   ___2   ___3   ___Other (Specify)________

24b. Why did you take a leave of absence? (INTERVIEWER ABSTRACT STUDENT RESPONSE)

25. What factors other than the ones I've mentioned here have slowed down or hindered your progress toward graduation? (INTERVIEWER ABSTRACT STUDENT RESPONSE)

26. And what other factors have speeded up or helped your progress toward graduation? (INTERVIEWER ABSTRACT STUDENT RESPONSE)

27. (IF RESPONDENTS TAKE MORE THAN 4 YEARS TO GRADUATE): What would you say is the most important reason that you have needed more than four years to complete your undergraduate studies? (INTERVIEWER ABSTRACT STUDENT RESPONSE)

28. Overall, how satisfied or dissatisfied are you with the length of time it will take you to graduate?

___(1) Very dissatisfied

___(2) Somewhat dissatisfied

___(3) Neutral

___(4) Somewhat satisfied

___(5) Very satisfied

29. Looking back, how well or how poorly did your high school education prepare you for the academic demands of UCLA? Were you:

___(1) Very unprepared

___(2) Somewhat unprepared

___(3) Prepared

30. When you started college, did you expect to graduate in four years? ___(1)Yes (FINISH) ___(2)No (GO TO 30b)

30b. IF NO: Why not? (Probe: How long did you expect to take?)

Those are all our questions today. Thank you very much for your time.

CALIFORNIA STATE UNIVERSITY

FACTORS AFFECTING THE TIME TO DEGREE

Division of Analytic Studies
Patricia Stafford Robb
January 1988

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THE CALIFORNIA STATE UNIVERSITY

FACTORS AFFECTING THE TIME TO DEGREE

THE REQUEST: THE SUPPLEMENTARY LANGUAGE TO THE 1987/88 BUDGET ACT

Time to Degree Study. The University of California and the California State University (CSU) shall conduct studies to sample student opinion about factors which contribute to taking longer than four years to receive a baccalaureate degree. Each study shall sample graduate or prospective graduates of the spring of 1987 and shall include a representative sample of campuses and students who have taken five years or longer to complete the baccalaureate degree. Each study should include, but not be limited to, consideration of the following factors:

1. Availability of general education courses
2. Availability of major required courses
3. Admission status
4. Employment
5. Transfer (how many changes of institution)
6. Remedial coursework
7. Double majors
8. Lack of funds
9. Change of major
10. Reduced courseload
11. A comparison of time to degree at comparable universities, including those in other states.

These studies shall be submitted to CPEC. The commission shall review, comment on the studies, and make recommendations to the Legislature and the Governor.

THE SAMPLE

The sample for the Time to Degree Study was drawn, as requested, from the spring 1987 graduates. This was a cluster random sample selected within each of seven of the nineteen CSU campuses:

1. Bakersfield
2. Dominguez Hills
3. Fresno
4. Northridge
5. San Diego
6. San Jose
7. San Luis Obispo

The rationale for the choice of these campuses was to establish a sample that would reflect the breadth and variety of the system. The characteristics of enrollment size, urban or rural environment, and ethnic diversity were considered of primary importance for the selection. Since the San Diego campus was of specific concern to the legislature, it was included in the sample.

On each of the seven campuses the individuals within the graduating class who took longer than four years to graduate from time of first enrollment were identified. The final sample was established by a random drawing from four cells in a two-by-two design:

1. Those who entered the CSU as first time freshmen
2. Those who transferred into the CSU

These two cells were crossed by:

1. Those who took longer than four years but fewer than five
2. Those who took five years or longer

Figure 1 of Appendix A depicts the actual sample for the CSU Time to Degree Survey.

The questionnaire and an accompanying letter from Chancellor Reynolds were mailed to each of the 3,590 selected graduates. The letter and questionnaire have been reproduced as Figures 2 and 3 in Appendix A.

QUESTIONNAIRES RETURNED

Of the 3,590 graduates selected to be part of the survey of students' progress towards their bachelor's degree, 1,450 returned the questionnaire. This represented 40% of the sample. In addition to completing the specific questions over one-half (56%) took the time to comment on specific problems, advantages, or both, that they encountered during their years of study on a California State University campus. Many wrote that they appreciated having the opportunity to express some of their concerns and hoped they would be heard - whether negative or positive.

The holiday season delayed the survey cycle somewhat and, since substantial numbers of questionnaires were still being returned to the Chancellor's Office, the cutoff was not made until January 1, 1988. It seemed appropriate to include as many responses as possible since so many of our graduates were taking their time and effort to complete the survey.

TABLE 1
STUDY OF SPRING 1987 GRADUATES
Actual Sample and Returned Questionnaires

	First Time Freshmen			Transfers			Total		
Campus	Sample	Return	Ratio	Sample	Return	Ratio	Sample	Return	Ratio
San Luis Obispo	208	83	.3990	307	123	.4067	515	206	.4000
Fresno	264	96	.3636	304	97	.3191	568	193	.3398
Bakersfield	40	14	.3500	201	80	.3980	241	94	.3900
Dominguez Hills	70	17	.2429	321	131	.4081	391	148	.3785
San Diego	325	127	.3908	302	128	.4238	627	255	.4067
Northridge	317	147	.4637	299	135	.4515	616	282	.4578
San Jose	316	136	.4304	316	136	.4304	632	272	.4304
TOTAL	1540	620	.4026	2050	830	.4049	3590	1450	.4039

THE RESPONSE CHARACTERISTICS

The percentage of graduates by campus who returned the questionnaire was not significantly different from the sample mailed to the spring 1987 graduates from each campus. Forty percent of all the sample questionnaires were returned; this was represented by 40% of the graduates who originally entered as first time freshmen and by 40% of those who had transferred onto the CSU campus where they were awarded the baccalaureate (Table 1). Additionally, the returns were representative within the categories by campus, gender, admission basis, and ethnicity (Table 2).

Gender
The returned questionnaires reflected 55.9% women, 43.9% men, and 0.2% declined to answer. These proportions do not vary significantly from the total graduates (a few more women than men responded to the survey).

Ethnicity
The rates of minorities represented are slightly different but not to a significant degree from the total graduate population.

Admission Basis
Most of the graduates (94.7%) reported entering as regular admits. The balance of the graduates were admitted under the following status: Exception (special action) 1.9%, Educational Opportunity Program (EOP) 2.8%, Disabled 0.3%, and not reported 0.3%.

TABLE 2

Percent of Questionnaires Returned by Selected Categories

Campuses	Sample As a Percent of Spring Graduates Returned	Mailed
Bakersfield	6.5	6.7
Dominguez Hills	10.2	10.9
Fresno	13.3	15.8
Northridge	19.4	17.2
San Diego	17.6	17.5
San Jose	18.8	17.6
San Luis Obispo	14.2	14.3
	100.0	100.0

	Questionnaires Returned Percent		All Graduates 1985-86 Year Percent
Admission Basis			
Regular	94.7		93.6
Exception (Special Action)	1.9	5.3	6.4
EOP	2.8		
Disabled	0.3		
Unknown	0.3		
	100.0		
Ethnicity			
American Indian	0.3		1.4
Asian	7.9		9.6
Black	3.5		4.0
Filipino	1.3		1.5
Mexican American	5.2		5.0
Other Hispanic	1.8		2.7
Pacific Islander	0.1		0.4
White	79.8		75.4
	100.0		100.0
Decline to State or Other	4.7		11.2
Gender			
Men	43.9		47.3
Women	55.9		52.7
Decline to Answer	0.2		0
	100.0		100.0

Anticipated and Actual Time Lapse to Degree

Although most of the CSU graduates (58.5%) in the survey had originally expected to graduate within four years, 41.5% anticipated that it would take five years or longer. Some of the graduates indicated they had set no time goal - just to go as long as it was necessary to complete the degree considering their particular life situations.

In this survey of graduates who took longer than four years to graduate, 57.1% enrolled for less than a full time program sometime during their college career. However, 42.8% reported that they carried a full time program each term. A full-time term courseload is considered to be 12 units as defined for fee purposes and financial aid. However, taking only 12 units per term (24 per year) would result in a minimum time of five years to complete the degree requirements. A fairly high percentage (38.1%) took at least one term off and, of these, 16.3% took three or more terms off from college.

The total number of years between first enrolling in college after high school and graduation from the CSU ranged from four and one-half years to thirty-five years. This is the time lapse and not continuous enrollment time. For these graduates who took longer than four years to complete the bachelor's degree the median was six years. The percentage rates within selected time groups were:

TABLE 3

Percent of Graduates	Time Lapse to Degree
3.0	More than 4 but less than 5 years
36.3	5 to 5.5 years
22.5	6 to 6.5 years
9.4	7 to 7.5 years
7.8	8 to 9.5 years
10.2	10 to 15 years
5.9	Over 15 years
4.9	No response

RANKING OF FACTORS THAT INFLUENCED TIME TO DEGREE

In the first section of the questionnaire specific questions were asked of the graduates. These responses provided data such as major, admission basis, gender, ethnicity, and number of terms taken off while the degree was in progress.

In the second section the graduates were requested to respond by rating the extent to which each of twenty factors contributed to the length of time to degree (the twentieth included an open ended response). These factors have been ranked in order of importance to the graduates in Table 4. The index of importance was computed by the following method: multiplying the number of graduates who assigned a given value code (to each reason) by the weight of that value (0, 1, 2, or 3) and dividing that sum by the total number of graduates responding. The second column of figures reflects the percent of the total number of graduates who cited that reason to have had some significance in the time to degree.

Data from the two sections are interrelated below to respond most directly to the request of the "Time to Degree" study. These data have been organized by rank order of importance as ascribed by the graduates to have contributed to the time beyond four years to graduate (Table 4).

TABLE 4
REASONS FOR TAKING MORE THAN FOUR YEARS TO GRADUATE RANKED BY IMPORTANCE AS REPORTED BY ALL GRADUATES IN THE SAMPLE

		Index of Importance	% Grads Citing As A Factor
1.	Carried a reduced courseload at some time during your college years	1.419	65.9
2.	Desired to combine work and education	1.390	68.3
3.	Reduced courseload caused by need for employment	1.383	63.6
4.	Difficulties in getting courses required for your major	1.234	62.4
5.	Difficulties in scheduling general education courses	1.077	56.9
6.	Change of major	.998	45.6
7.	Intentionally took extra courses beyond requirements for your degree	.938	51.2
8.	Transferring between colleges	.867	39.8
9.	Other* (Such as: inadequate guidance and counseling, indecision about goals, administrative problems, or some variation of the other reasons listed)	.852	30.2
10.	Family concerns	.839	39.3
11.	Wished to take time off from college for other experiences	.676	31.1
12.	Delays caused by evaluation of courses necessary to complete the final requirements for a degree	.674	37.6
13.	Academic difficulties with particular courses	.657	39.5
14.	Financial aid	.419	19.6
15.	Delay to prepare for internship, student teaching, or other programs	.321	16.9
16.	Remedial coursework	.278	17.4
17.	Child care difficulties	.216	9.1
18.	Delays caused by the graduation writing assessment requirement	.106	6.7
19.	Delays caused by the Entry Level Math (ELM) requirements	.093	5.4
20.	Delayed graduation to defer repayment of government loans	.046	3.0

1. Reduced Courseload

The factor of a reduced courseload at some time during their college years was rated highest on the index of importance by the graduates.

Minimal requirements for bachelor's degrees are based on the completion of 124 semester units. Therefore, any bachelor's degree in the CSU would require a student to complete an average of 15.5 units per term. This is in contrast with the definition of the full-time student status established for fee purposes of financial aid: 12 units. Certain degrees require substantially more units and completion within four years is difficult (see Table 5).

TABLE 5
Total Unit Requirements for Selected Undergraduate Degrees

Minimum Number of Units	Degree
124	Bachelor of Arts
132	Bachelor of Music
132	Bachelor of Fine Arts
124-132	Bachelor of Science
140	Bachelor in Engineering
165-175	Bachelor of Architecture

For example, the BS in Engineering would require an average of 17 1/2 units per term to complete the course work within four years. The Bachelor of Architecture, however, is defined as a five-year degree. This necessitates an average 16 1/2 units per term if it is to be completed within five years. The time to degree would be even longer than the expected four-year or five-year requirement if the student carried a reduced courseload at any time.

Most of the responses in Table 4 provide reasons for students carrying a reduced courseload. Lack of funds and the corresponding need for employment are the most important factors that necessitate a student to enroll for a reduced courseload, and to take longer than the traditional four years. Other factors do contribute significantly to the courseload as well as time to degree. Graduates commented in the survey that to maintain the grades that they desired, a reduced courseload was necessary if any other activity (such as work, family, athletics) was an important factor in their lives.

When asked if they had enrolled at any time for less than a full-time program of study (fewer than 12 units), 57.1% responded yes. In addition 38.1% took at least one complete term off from enrollment; of that percentage 26.4% took one to three terms off and 11.7% took four or more terms off.

2. Desire to Combine Work and Education
3. Reduced Courseload Caused by Need for Employment

The factors involving employment and lack of funds, as ranked in Table 2, were placed second and third in importance by all graduates. The need or desire to combine education and employment as a primary reason for taking more than four years to graduate was cited by 68.3% of all graduates.

It came as no surprise that most of the graduates worked during the CSU undergraduate years. The 90.2% employment rate was even higher than expected. In terms of the number of hours reported as worked during the average week were: 16.9% worked 1-19 hours, 55.0% worked from 20-39 hours, and 18.3% worked 40 or more hours. Only 9.8% of the sample were not employed on a regular basis.

4. Availability of Major Required Courses
5. Availability of General Education Courses

Anecdotal information from the campuses in the preliminary survey indicated that students reported experiencing difficulties when trying to enroll in required courses because places were not available. This was perceived to be the case by a high percentage of the graduates and the index of importance places both sets of courses as significant.

Ranked next to the need or desire to combine education and employment and the resulting reduced courseload were difficulties in getting courses required for the major (fourth) and scheduling general education courses (fifth). From the comments made by the graduates, these difficulties were caused by: (a) the lack of availability of these courses during the terms and times that the students wanted to take them; and (b) the logistical problems involved with having to combine work with scheduling specific classes. Courses may be filled and closed, or changed after the schedule has been established by the student and it may be too late to get into another appropriate class during that semester. This has delayed graduates, especially if the desired course is a prerequisite for another in the major or if it is a general education course.

Sixty-two percent of all graduates indicated there had been a problem in enrolling for courses that were required for their majors. Only slightly more than one-third indicated that availability of major required courses had not been a factor.

Over half (56.9%) of the graduates cited difficulties in scheduling general education courses as a factor in adding to the time it took to complete the degree. Graduates who were minorities apparently had somewhat less difficulty with the availability of general education courses, however, over one-half (54.1%) also indicated problems in enrolling in general education courses. The index ranked this factor fifth in importance for all graduates and seventh in importance for known minority graduates.

Graduates who were native to the system (first time freshmen) placed greater importance on the difficulties of course availability than did the graduates who transferred into the system. Over two thirds (68.7%) of the native graduates cited difficulties in getting courses that were required for the major. A significantly lower percentage (57.7%) of the transfer group had problems with availability of major courses. Sixty three percent of the natives and 52.3% of the transfers considered the availability of the required general education courses to have been a delaying problem.

6. Change of Major

The change of major sometime during the undergraduate years ranked sixth in importance for contributing to a longer time to degree. Among all graduates, almost one-half (47.3%) changed their majors: the majority changed once (31.4%), 9% changed twice, 5% changed three times, and 1.8% changed majors four or more times. Only slightly more than half (52.7%) of all graduates, including both transfers and those who began as first time freshmen, stayed with the same major throughout their college years.

The change of major was identified as creating the necessity for additional course work according to comments by the graduates. It made a notable addition if the change of majors occurred at the time of transfer to the graduating CSU campus if the new major involved a substantially different field of study.

7. Intentionally Took Extra Courses Beyond Requirements For Degree

The intentional addition of nonrequired course work ranked seventh in importance by the spring 1987 graduates. There are several basic reasons for taking extra courses. Having a strong minor, in part, demands extra course work with any major, and particularly, if this minor is disassociated somewhat from the major course requirements. One example of this is the combination of a foreign language minor, Spanish, in conjunction with any number of majors. Such a minor may be desirable, if not necessary, to a career track teacher, business person, or any number of other anticipated positions. In addition this rating was influenced by many students who took courses that were of interest to them, not to fulfill a specific requirement of the college but as a personal requirement to expand their learning.

Double Majors

Few graduates (2.5%) reported a double major. This was not a prime concern in the opinion of the graduates. The high unit requirements of specific single majors elicited comment from the graduates that suggested completion within four years was not feasible. A number of graduates did mention having taken courses for a minor and thus although fulfilling somewhat fewer requirements than a second major ultimately did require attending for more terms.

8. Transferring Between Colleges

Transferring between colleges ranked eighth in importance for taking longer than four years to graduate. These students frequently had completed courses elsewhere that were either not acceptable to fulfill specific general education requirements nor acceptable within the major. There were comments on the questionnaires that the loss of courses or of units upon transfer required additional work. This was an unplanned additional unit load during the undergraduate years and increased the time spent to the baccalaureate.

Of the graduates who originally transferred onto the CSU campus from which they graduated, 56.1% had attended two prior institutions; 22.5% three prior institutions, 9.5% four prior institutions, 4.6% five or more prior institutions, and 7.3% unknown.

Nearly three fourths, 73.1% transferred into the CSU campus from a two-year institution; 24% from a four-year institution and 2.9% unknown.

9. Other

Change of major, transferring between colleges, or indecision about personal goals during the early college years also are ranked with high importance. These have been related in the comments by graduates to the lack of availability of good advisors and the need to require students to have regular contact with a knowledgeable educational counselor. It was often stated that a good advisor (on the community college campus or on the CSU campus) might have helped the student avoid unnecessary course work, or administrative problems, as well as serve as a guide. Other comments included in "Other" were such factors as medical and personal problems, involvement in athletics, taking a reduced courseload in order to retain a high GPA while enjoying the college experience.

10. Family Concerns

Family concerns ranked tenth and reflect the nontraditional nature of many of the CSU graduates. Many were problems that were created by a change of family structure and the resulting lack of college funds. This could be in terms of reduced parental aid or spouse aid to the student, or the need to contribute financially to parents, spouse, or children. Concerns cited by women in particular involved marriage, having children and resulting time off from study until the child was back in school and interrupting or transferring college to follow husband. Minorities rated family concerns somewhat higher than all graduates: 47% of minorities and 39.3% of all graduates, considered this to be a factor in adding to the time to degree. This may be a reflection of gender since there were more minority women than men who responded to the questionnaire.

11. Wished To Take Time Off From College for Other Experiences

This factor was ranked mid-point and the comments ranged from enhanced learning experiences to dealing with personal tragedies. In general this factor includes career related opportunities, travel, foreign exchange program, choosing to marry and to raise children before enrolling as a full time student, time off to work and to reassess life goals, to become involved in extracurricular activities such as theatre, dance, athletics, and student government, or joining the military.

12. Delays Caused by Evaluation of Courses Necessary to Complete the Final Requirements for a Degree

Although the index rating placed this factor as twelfth, the percentage of graduates who indicated that this influenced a delay to degree was: 37.6% of all and 47.3% of minority graduates. If the "grad check" is completed late, a course or two may be required beyond what was anticipated. This has created the necessity of enrolling for an additional semester. Some of the graduates commented that some of these delays could be avoided with additional counseling and certainly by an earlier evaluation of the final requirements.

13. Academic Difficulties with Particular Courses

Among all spring 1987 graduates, 39.5% indicated that academic difficulties with particular courses had added to the time to degree. A higher rate of minority graduates, 51.6% expressed an opinion that this had affected the time spent in college.

14. Financial Aid

Less than a fifth (19.6%) of all graduates indicated that financial aid had been a problem; one third (33.3%) of the minority graduates considered this to have been a factor. In these terms financial aid was considered to be aid from a source other than a parent or relative; in general, financial aid was acquiring or attempting to acquire money through the college or government.

15. Delay to Prepare for Internship, Student Teaching, Other Programs

This was one of the less important factors related to the time to degree. Several comments were made that the actual course work in similar programs was considerable although the unit load value was relatively small. This influenced both reduced courseload and length of time to degree but there apparently was little actual delay to prepare for these programs.

16. Remedial Course Work

The percentage of those needing to take remedial coursework was relatively small. It was not necessary for the majority (82.3%) of the graduates to spend extra time taking remedial course work; 5.4% took both remedial English and math while an additional 5% took only remedial math and 7.2% took only remedial English. Presumably, enrolling in remedial courses ultimately would mean the student would take longer to receive the degree. Time spent taking remedial coursework was cited less often as significant then were most of the other factors. Seventeen percent of all graduates - but thirty percent of minorities - attributed some importance to the need to take remedial studies in order to continue the pursuit of their degrees.

17. Child Care Difficulties

It had been suggested that lack of child care was a prime reason for the slow progress to the degree. In this survey, however, the difficulties involved with child care were not considered to be of substantial importance to most of the graduates. The 9.1% of all graduates and the 13.3% of minority graduates did cite this as a factor but generally did not rank it highly. It would appear from the comments that, more frequently, women waited until the youngest child was in school or grown before returning to college - or the parent had made other provisions during the college years.

18. Delays Caused by the Graduation Writing Assessment Requirement

One possible concern at the beginning of the study as the upper division writing requirement which must be completed in order to graduate. There were some indications that the difficulties in completing this writing requirement might be delaying the final steps toward the degree for an unknown number of students.

The graduation writing requirement apparently was not considered to be a problem among the greatest majority (91%) of those who graduated during the spring of 1987. This lack of a problem with the upper division writing requirement was perceived by minority graduates as well as the total number of graduates. Only 7.7% of the graduates needed two attempts to complete the requirement, and an additional 1.3% needed three or more attempts to satisfy the graduate writing requirement.

19. Delays Caused by Entry Level Math (ELM) Requirements

All students must fulfill the ELM requirement before they are permitted to take any college level math course. This was established in order to prevent ill-prepared students from enrolling in college level mathematics. There was some evidence prior to the survey that some students take the ELM many times before passing the test and therefore this may be a cause of slowing the progress to the baccalaureate.

In the opinion of the spring 1987 graduates the ELM requirement was cited to be less important in slowing the degree progress than the early observations had suggested. This math requirement was assigned a value of even less significance than the writing requirement. Those graduates who met the ELM requirement the first time was 96.2%; the remaining 3.8% attempted the ELM two or more times before successful completion.

20. Delayed Graduation to Defer Repayment of Government Loans

This factor was cited least frequently as having effect on the time to degree among the graduates.

DIFFERENCES AMONG CAMPUSES

Differences within the California State University become quite apparent when the reasons for taking more than four years to graduate are computed for each of the campuses. The indices of importance as perceived by the graduates are significantly different. The following statements indicate the extremes in the range of how the graduates from each campus perceived each factor as having influenced the time to degree. The computed index of importance for each factor by each of the seven campuses in the sample has been reported in Table 6.

Comparing the indices of importance, the factors that combine work, education, and a reduced courseload are still rated among the highest on each campus. Carrying a reduced courseload caused by need for employment is notably lowest on the San Luis Obispo campus (.879) and highest on the Dominguez Hills campus (1.818); the first two reasons fall within this same pattern although with a less extreme range of rates.

Difficulties in getting or scheduling courses: Northridge and San Diego graduates indicated the most difficulties in getting courses required for their majors; Fresno and Bakersfield reporting the lowest index. San Luis Obispo, San Diego and Northridge ranked difficulties in scheduling general education courses high; Bakersfield and Dominguez Hills ranked this difficulty the lowest. On the San Luis Obispo campus this factor was perceived as being the most important of any factor in contributing to the delay in time to degree.

The change of major was more of a factor on the San Diego, San Jose and Fresno campuses than on the San Luis Obispo campus.

Intentionally taking extra courses beyond requirements was considered more important to adding time to degree on the San Luis Obispo and Northridge campuses than at the Bakersfield or Dominguez Hills.

Transferring between colleges as a factor was rated high on the Bakersfield, Dominguez Hills, and San Luis Obispo campuses and notably less important on the Fresno campus.

Other difficulties were rated fairly closely across the campuses; San Luis Obispo and Dominguez Hills falling on each end of the scale.

Family concerns had a significantly different influence on time to degree depending on the specific campus. The graduates at Bakersfield rated this factor at 1.670 - the most important of any of the twenty reasons, and Dominguez Hills placed it fourth. San Luis Obispo graduates on the other extreme rated this only a .466. This reason reflects the very different nature of the CSU campuses.

TABLE 6
REASONS FOR TAKING MORE THAN FOUR YEARS TO GRADUATE
RANKED BY IMPORTANCE AS REPORTED BY ALL GRADUATES
INDEX FOR EACH CAMPUS IN THE SAMPLE

Ranked by All Graduates		BAK	DH	FRE	NOR	SD	SJ	SLO
1.	Carried a reduced courseload at some time during your college years	1.500	1.777	1.295	1.450	1.537	1.456	1.005
2.	Desired to combine work and education	1.277	1.541	1.342	1.493	1.298	1.518	1.184
3.	Reduced courseload caused by need for employment	1.436	1.818	1.342	1.489	1.455	1.364	.879
4.	Difficulties in getting courses required for your major	.957	1.081	.927	1.394	1.376	1.290	1.291
5.	Difficulties in scheduling general education courses	.713	.736	.808	1.152	1.310	.978	1.481
6.	Change of major	.904	.899	1.052	.989	1.180	1.066	.757
7.	Intentionally took extra courses beyond requirements for your degree	.606	.757	.831	1.032	.969	.904	1.150
8.	Transferring between colleges	1.170	1.142	.668	.730	.749	.935	1.102
9.	Other* (Such as: inadequate guidance and counseling, indecision about goals, administrative problems, or some variation of the other reasons listed)	.891	.608	.803	.897	.824	.915	.947
10.	Family concerns	1.670	1.257	.902	.709	.824	.713	.456
11.	Wished to take time off from college for other experiences	.989	1.034	.554	.660	.655	.548	.607
12.	Delays caused by evaluation of courses necessary to complete the final requirements for a degree	.436	.878	.710	.639	.804	.585	.607
13.	Academic difficulties with particular courses	.489	.608	.715	.670	.710	.625	.670
14.	Financial aid	.479	.527	.497	.290	.498	.349	.427
15.	Delay to prepare for internship, student teaching, or other programs	.277	.196	.301	.291	.349	.320	.456
16.	Remedial coursework	.234	.338	.352	.252	.310	.239	.233
17.	Child care difficulties	.723	.547	...	.106	.173	.143	.049
18.	Delays caused by the graduation writing assessment requirement	.064	.149	.150	.096	.145	.044	.097
19.	Delays caused by the Entry Level Math (ELM) requirements	.043	.155	.067	.124	.149	.048	.044
20.	Delayed graduation to defer repayment of government loans	.043	.027	.047	.060	.063	.044	.019

The graduates from the Dominguez Hills and Bakersfield campuses also considered taking time off from college for other experiences to be much more important than did the graduates on the San Jose and the rest of the campuses.

Delays caused by evaluation of courses necessary to complete the final requirements for a degree as a factor was rated fairly high on the Dominguez Hills campus. It was the only campus among the seven that rated this factor higher than difficulties in scheduling general education courses. The San Diego campus also was on the high end of the scale across the seven campuses. Bakersfield graduates rated this reason for delay as not particularly important in the progress to degree.

Academic difficulties with particular courses was fairly low in rank among all the campuses with Bakersfield the lowest and Fresno the highest.

The concerns with financial aid did not vary substantially among the campus graduates: Dominguez Hills rated this .527 and at the other end of the scale Northridge computed .280.

Delay to prepare for internship or other programs was rated lowest among Dominguez Hills graduates and highest on the San Luis Obispo campus.

Remedial coursework as a delay in the time to degree was ranked very low among all the campuses.

Child care difficulties were ranked .723 on the Bakersfield campus with Dominguez Hills next highest with .547 (this coincides with the high rate of family concerns of those graduates) compared with the graduates of San Luis Obispo rating of .049.

The last three factors: delays caused by the writing or ELM requirements and to defer payment of government loans were ranked at the bottom by all campuses.

SUMMARY

The results of this study provide information that should enable the California State University to serve more effectively our students. It is important that we provide an environment to students supportive of orderly progress to defined degree objectives. The graduates surveyed perceive a need to remove or modify some current practices that form barriers to progress toward completion of a degree. At the same time, it is clear that most of the graduates surveyed anticipated that attainment of a baccalaureate degree would take longer than the "traditional" four years.

This study has identified a number of key factors that contributed to the lengthening of the time to degree. For purposes of this discussion, it is useful to combine our findings into two separate, but somewhat overlapping, groups. The categories are:

(A) Factors that deal with student motivations - issues subject to student control.

(B) Factors that are subject to intervention by University policies and procedures.

A. Issues subject to student control

Earlier in this report, we pointed out that a minimum of 124 semester units are required to complete the Bachelor of Arts degree. This means that a student who takes the minimum number of units each term (i.e., no excess electives, no remedial courses, no change of major, etc.) must take an average of 15.5 units for each of eight semesters. However, we know that the average number of units completed, per year, for all students at semester campuses, is 22.5. Thus, an average student taking an average load will take 5.5 years to complete a minimal BA program. The responses to the questionnaire reveal that over 90 percent of the graduates responding to our inquiry were employed during their student days. These individuals demonstrate a concern for values beyond traditional academic classroom. They took courses designed to expand their horizons beyond the limited scope of career specific studies. They elected minors, they learned foreign languages, they "stopped out" for a time to resolve family, personal, and financial problems. They explored new career alternatives, they travelled. The variety of activities were impressive. They did not wish to be constrained to a defined time base nor a defined unit load. They specifically wanted the opportunity to change majors or take more or fewer units. Clearly, the responses from these graduates were not those of frivolous, uncaring individuals. Rather, the responses are best characterized as those of responsible, growing adults immersed in a college "experience" concerned both with career enhancement and exploration of the mind.

B. Factors that fall within the scope of University policy and procedure

Basically, five of the factors identified as perceived impediments toward timely completion of degree requirements derive from university policies and procedures. These are:

- # 4 Difficulties in getting courses required for your major.
- # 5 Difficulties in scheduling General Education courses.
- # 8 Transferring between colleges.
- # 9 Inadequate guidance and counseling.
- #12 Delays caused by evaluation of courses necessary to complete the final requirements for a degree.

Factors 4 and 5 are due, in part, to the general unavailability of sufficient course sections in over-subscribed degree majors, and, in part, to a lack of flexibility in the students own schedule due to employment demands. Our campuses clearly need to review course scheduling practices to minimize disruptions to the progress of students. This review has already occurred on most campuses - but it is necessary to continue the process. With general education courses, in particular, we are accelerating our efforts to define common General Education requirements across all three segments of public higher education in California. This effort, along with renewed efforts on campus regarding the scheduling of general education courses should minimize the importance of this factor in the future.

The issue of articulation of programs between and among campuses is a continuing one. CSU campuses are enjoined to articulate program requirements, particularly with "feeder" colleges, the source of the majority of transfers. Existing policy allows the unchallenged transfer of any and all "baccalaureate level" courses. However, specific degree requirements requires explicit articulation. The results of this study suggest the need to continue these articulation efforts.

We continue to address the need for improved counseling and guidance with faculty training sessions and workshops. The identification of this factor as an impediment to timely completion of degree requirements is not entirely unexpected. We will increase our efforts by training peer group counselors, by establishing and supporting the concept of drop-in counseling centers on our campuses.

The final factor involves inordinate delays in the graduation check process. In part, these are caused by the necessity to check completion of requirements by hand given the lack of availability of modern computing equipment. We will review existing procedures to remove unnecessary administrative roadblocks to the "grad-check" process.

Finally, we conclude that the information gathered in this survey is useful and informative, We intend to share our results widely within the CSU as part of our efforts to assist students to meet their academic goals in a timely fashion. The study has demonstrated that there is no single or simple reason as to why graduates take more than four years to complete their programs. One of the respondents to our survey expressed it well when he wrote:

> "I went to college for an education, then a degree, without a four year time limit as a factor."

Clearly, for this student, the first priority was an education.

APPENDICES

THE CALIFORNIA STATE UNIVERSITY

BAKERSFIELD · CHICO · DOMINGUEZ HILLS · FRESNO · FULLERTON · HAYWARD · HUMBOLDT · LONG BEACH · LOS ANGELES · NORTHRIDGE
POMONA · SACRAMENTO · SAN BERNARDINO · SAN DIEGO · SAN FRANCISCO · SAN JOSE · SAN LUIS OBISPO · SONOMA · STANISLAUS

OFFICE OF THE CHANCELLOR
(213) 590-

Appendix
Figure 1

November 13, 1987

Dear Graduate:

You have been selected in a sample of spring 1987 graduates to take part in an important survey of students' progress towards their bachelor's degree.

The enclosed survey is aimed at determining the reasons that many of the California State University's graduates take more than four years to obtain their bachelor's degree. We expect that in many cases it is because they studied part-time, took time off to pursue other interests, changed their major, or some other reason. It will be useful for us to determine the number of graduates for whom these reasons apply. On the other hand, it may be that some students encountered institutional impediments to their progress. If so, we need to know what these impediments were so that we can develop polices that will alleviate such problems.

We ask that you take a few moments to fill out the enclosed survey and return it by November 30 in the enclosed stamped, addressed envelope. In doing so, you will be providing the CSU with valuable information that will assist us in helping present and future students to graduate.

The information that you provide will be used only by the CSU to compute summary tables. No individual will be identified and the confidentiality of your responses is guaranteed. We thank you for your assistance with this important study.

Sincerely,

W Ann Reynolds

W. Ann Reynolds
Chancellor

Enclosure

400 GOLDEN SHORE, LONG BEACH, CALIFORNIA 90802 INFORMATION: (213) 590-5506

Appendix
Figure 2

EACH SAMPLE CAMPUS
15,25,35,55,65,70,80

The California State University

Graduate Opinion Survey: Factors Affecting Time to Bachelor's

Please check ☑ the appropriate box.

1. What was your major ____
2. Did you have a double major? If so, what? ____________________
3. Did you change your major? ☐ Yes ☐ No How many times? ______
4. Were you originally admitted to the CSU:
   as a ☐ Regular admit or as an ☐ Exception (special action)
   ☐ EOP ☐ Disabled Students
5. At the time you were first admitted to any college, did you plan to graduate within four years? ☐ five years ☐ or ________ years
6. Did you take any terms off at any time while attending college?
   ☐ Yes ☐ No If so, how many ____________________?
7. Did you enroll at any time for less than full time program of study (fewer than 12 units)? ☐ yes ☐ no
8. When did you first enroll in college after graduating from high school _____ month _____ year
9. Total number of years from this time to graduation at CSU __________
10. Did you need to take remedial coursework?
    ☐ No If yes: ☐ English ☐ Math ☐ Both
11. How many times did you take the Entry Level Math (ELM) examination? ______
12. How many times did you take the graduation writing assessment requirement? ______
13. Were you employed during the years you attended the University?
    ☐ Yes ☐ No
14. When you worked, how many hours a week did you work on the average ______
15. Ethnicity: ☐ American Indian(1) ☐ Asian(5) ☐ Black(2) ☐ Filipino(f)
    ☐ Mexican-American(3) ☐ Other Hispanic(4) ☐ Pacific Islander(6)
    ☐ White(7) ☐ Other or Decline to State(9)
16. Sex: ☐ Female ☐ Male

* 17. How many different colleges and universities did you attend? (include each CSU campus) ________________

* 18. From what type institution did you transfer? ☐ 2 year ☐ 4 year

PLEASE CONTINUE TO THE NEXT PAGE

Please respond to the following questions by rating the extent to which each contributed to your taking more than four years to graduate.

Use the following rating scale:

3 = extremely important
2 = moderately important
1 = slightly important
0 = not a factor

Financial and Employment

1. ____reduced courseload caused by need for employment
2. ____desired to combine work and education
3. ____delay to prepare for internship, student teaching, or other programs
4. ____delayed graduation to defer repayment of government loans
5. ____financial aid

Educational Planning

6. ____change of major
7. ____remedial coursework
8. ____delays caused by the Entry Level Math (ELM) requirements
9. ____delays caused by the graduation writing assessment requirement
10. ____difficulties in scheduling general education courses
11. ____difficulties in getting courses required for your major
12. ____academic difficulties with particular courses
13. ____delays caused by evaluation of courses necessary to complete the final requirements for a degree
14. ____intentionally took extra courses beyond requirements for your degree
15. ____carried a reduced courseload at some time during your college years

* 16. ____transferring between colleges

Personal

17. ____family concerns
18. ____child care difficulties
19. ____wished to take time off from college for other experiences

Other

20. ____other, please specify:

Comments:

*These three items were deleted in the questionnaires that were sent to graduates who originally entered as first time freshmen.

Appendix

Figure 3
Time to Degree
Actual Samples for Spring 1987 Graduates

	First Time Freshmen			Transfers			
CAMPUS	4.25-5	Greater Than 5	Total	5	Greater Than 5	Total	Total Sample
San Luis Obispo	161 97	111 111	208	107 107	382 200	307	515
Fresno	245 103	161 161	264	203 99	642 205	304	568
Bakersfield	19 19	21 21	40	27 27	174 174	201	241
Dominguez Hills	40 40	30 30	70	25 25	296 296	321	391
San Diego	314 91	234 234	325	386 98	1194 204	302	627
Northridge	336 110	319 207	317	150 99	942 200	299	616
San Jose	254 112	204 204	316	179 105	1117 211	316	632
Total Sample	572	968	1540	560	1490	2050	3590

Notes: The first row of numbers for each campus is the total number of graduates. The second row of underlined numbers is the number actually sampled.

For first time freshmen, the time categories are the time to graduation from matriculation. For transfer students, the time categories are the time from high school graduation to CSU graduation.

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

THE California Postsecondary Education Commission is a citizen board established in 1974 by the Legislature and Governor to coordinate the efforts of California's colleges and universities and to provide independent, non-partisan policy analysis and recommendations to the Governor and Legislature.

Members of the Commission

The Commission consists of 15 members. Nine represent the general public, with three each appointed for six-year terms by the Governor, the Senate Rules Committee, and the Speaker of the Assembly. The other six represent the major segments of postsecondary education in California.

As of January 1988, the Commissioners representing the general public are:

Mim Andelson, Los Angeles
C. Thomas Dean, Long Beach, *Chairperson*
Henry Der, San Francisco
Seymour M. Farber, M.D., San Francisco
Lowell J. Paige, El Macero
Cruz Reynoso, Los Angeles, *Vice Chairperson*
Sharon N. Skog, Palo Alto
Thomas E. Stang, Los Angeles
Stephen P. Teale, M.D., Modesto

Representatives of the segments are:

Yori Wada, San Francisco; appointed by the Regents of the University of California

Claudia H. Hampton, Los Angeles; appointed by the Trustees of the California State University

Borgny Baird, Long Beach; appointed by the Board of Governors of the California Community Colleges

Harry Wugalter, Thousand Oaks; appointed by the Council for Private Postsecondary Educational Institutions

Kenneth L. Peters, Tarzana; appointed by the California State Board of Education

James B. Jamieson, San Luis Obispo; appointed by California's independent colleges and universities

Functions of the Commission

The Commission is charged by the Legislature and Governor to "assure the effective utilization of public postsecondary education resources, thereby eliminating waste and unnecessary duplication, and to promote diversity, innovation, and responsiveness to student and societal needs."

To this end, the Commission conducts independent reviews of matters affecting the 2,600 institutions of postsecondary education in California, including Community Colleges, four-year colleges, universities, and professional and occupational schools.

As an advisory planning and coordinating body, the Commission does not administer or govern any institutions, nor does it approve, authorize, or accredit any of them. Instead, it cooperates with other state agencies and non-governmental groups that perform these functions, while operating as an independent board with its own staff and its own specific duties of evaluation, coordination, and planning,

Operation of the Commission

The Commission holds regular meetings throughout the year at which it debates and takes action on staff studies and takes positions on proposed legislation affecting education beyond the high school in California. By law, the Commission's meetings are open to the public. Requests to address the Commission may be made by writing the Commission in advance or by submitting a request prior to the start of a meeting.

The Commission's day-to-day work is carried out by its staff in Sacramento, under the guidance of its executive director, William H. Pickens, who is appointed by the Commission.

The Commission publishes and distributes without charge some 40 to 50 reports each year on major issues confronting California postsecondary education. Recent reports are listed on the back cover

Further information about the Commission, its meetings, its staff, and its publications may be obtained from the Commission offices at 1020 Twelfth Street, Third Floor, Sacramento, CA 98514; telephone (916) 445-7933.

TIME TO DEGREE IN CALIFORNIA'S PUBLIC UNIVERSITIES

California Postsecondary Education Commission Report 88-12

ONE of a series of reports published by the Commission as part of its planning and coordinating responsibilities. Additional copies may be obtained without charge from the Publications Office, California Postsecondary Education Commission, Third Floor, 1020 Twelfth Street, Sacramento, California 95814-3985.

Recent reports of the Commission include:

88-6 Comments on Educational Equity Plans of the Segments: A Staff Report on the Development of Plans by the State Department of Education, the California State University, and the University of California to Achieve the Educational Equity Goals of Assembly Concurrent Resolution 83 (1984) (February 1988)

88-7 Size, Growth, and Cost of Administration at the California State University: A Report Prepared by Price Waterhouse and MGT Consultants for the California Postsecondary Education Commission (February 1988)

88-8 Overview of the 1988-89 Governor's Budget for Postsecondary Education in California: Testimony by William H. Pickens, Executive Director, California Postsecondary Education Commission (March 1988)

88-9 Faculty Salaries in California's Public Universities, 1988-89: The Commission's 1987 Report to the Legislature and Governor in Response to Senate Concurrent Resolution No. 51 (1965) (March 1988)

88-10 Eligibility of California's 1986 High School Graduates for Admission to Its Public Universities: A Report of the 1986 High School Eligibility Study (March 1988)

88-11 Eligibility for Freshman Admission to the University of California: A Statement to the Regents of the University by William H. Pickens, Executive Director, California Postsecondary Education Commission, February 18, 1988 (March 1988)

88-12 Time to Degree in California's Public Universities: Factors Contributing to the Length of Time Undergraduates Take to Earn Their Bachelor's Degree (March 1988)

88-13 Evaluation of the California Academic Partnership Program (CAPP): A Report to the Legislature in Response to Assembly Bill 2398 (Chapter 620, Statutes of 1984) (March 1988)

88-14 Standardized Tests Used for Higher Education Admission and Placement in California During 1987: The Third in a Series of Annual Reports Published in Accordance with Senate Bill 1758 (Chapter 1505, Statutes of 1984) (March 1988)

88-15 Update of Community College Transfer Student Statistics Fall 1987: University of California, The California State University, and California's Independent Colleges and Universities (March 1988)

88-16 Legislative Update, March 1988: A Staff Report to the California Postsecondary Education Commission (March 1988)

88-17 State Policy for Faculty Development in California Public Higher Education: A Report to the Governor and Legislature in Response to Supplemental Language in the 1986 Budget Act (May 1988)

88-18 to 20 Exploring Faculty Development in California Higher Education: Prepared for the California Postsecondary Education Commission by Berman, Weiler Associates:

- **88-18** Volume One: Executive Summary and Conclusions, by Paul Berman and Daniel Weiler, December 1987 (March 1988)
- **88-19** Volume Two: Findings, by Paul Berman, Jo-Ann Intili and Daniel Weiler, December 1987 (March 1988)
- **88-20** Volume Three: Appendix, by Paul Berman, Jo-Ann Intili, and Daniel Weiler, January 1988 (March 1988)

88-21 Staff Development in California's Public Schools: Recommendations of the Policy Development Committee for the California Staff Development Policy Study, March 16, 1988 (March 1988)

88-22 and 23 Staff Development in California: Public and Personal Investments, Program Patterns, and Policy Choices, by Judith Warren Little, William H. Gerritz, David S. Stern, James W. Guthrie, Michael W. Kirst, and David D. Marsh. A Joint Publication of Far West Laboratory for Educational Research and Development • Policy Analysis for California Education (PACE), December 1987:

- **88-22** Executive Summary (March 1988)
- **88-23** Report (March 1988)